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Catalogue

2024-2025



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A well-known name with 32 years of experience in academic publishing in India for higher education books (Text & Reference), it is our goal to serve academic institutions, educators, and students in their pursuit for knowledge and excellence. We aim to provide books that are instrumental in facilitating effective teaching and learning experiences, empowering learners to achieve their academic goals.

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Website : www.techsarworld.com

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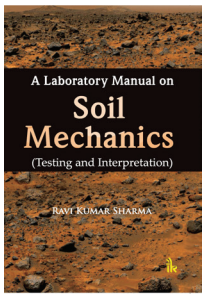
PHARMACEUTICAL SCIENCES 305—311

TITLE INDEX 312—332

AUTHOR INDEX 333—340

A Laboratory Manual on Soil Mechanics

Testing and Interpretation



Ravi Kumar Sharma

ISBN: 978-93-85909-35-1/Year 2016
Size 16 cm × 24 cm/Pages 160
Paperback/₹ 315.00

A Laboratory Manual on Soil Mechanics (Testing and Interpretation) presents an illustrative treatment of the testing techniques of soils in the laboratory and field for determination of engineering properties. Twenty-four select lab-based experiments have been included on the various aspects of Soil Mechanics.

Salient Features:

- Illustrative photographs and figures of experimental set-up
- Sample data along with interpretation
- Calculations and relevant graphs
- Viva-voce questions to enable the students prepare for the examinations

The testing procedure, methodology and suitable data presentation tables are based upon relevant Indian standard specifications. The data analysis shall make the students aware of techniques generally used for the determination of soil properties in the laboratory as well as in the field. With its coverage, the book is an indispensable lab manual for the civil engineering students and other allied areas like geotechnical engineering, agricultural engineering etc. It will also be a useful reference for scientists and researchers in the area of soil mechanics studies.

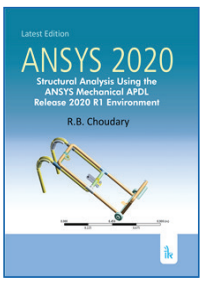
Contents:

Water Content Determination by Oven Drying (IS: 2720 PART II-1973)/Water Content Determination by Infrared Moisture Meter (IS: 2720 PART II-1973)/Water Content Determination by Calcium Carbide Method (IS: 2720 PART II-1973)/Specific Gravity Determination (IS: 2720 PART 3/SEC I-1980)/Grain Size Distribution—Sieve Analysis (IS: 2720 PART IV-1985)/Grain Size Analysis by Hydrometer Method (IS: 2720 PART IV-1985)/Compaction Test (IS: 2720 PART VII-1980)/ Determination of Liquid Limit (IS: 2720 PART V-1985)/Determination of Plastic Limit (IS: 2720 PART V-1985)/Determination of Shrinkage Limit (IS: 2720 PART VI-1972)/Determination of In-Situ Density of Soil (IS: 2720 PART XXIX-1975)/Determination of Unconfined Compressive Strength (IS: 2720 PART X-1991)/Determination of Shear Strength of Soil by Laboratory Vane Shear Test (IS: 2720 PART XXX-1980)/ Determination of Shear Strength of Soil by Direct Shear (IS: 2720 PART XIII-1986)/Determination of Shear Strength of Soil by Triaxial Test (IS: 2720 part XI-1993)/California Bearing Ratio Test (IS: 2720 PART XXXI-1990)/Consolidation Test (IS: 2720 PART XV-1986) /Permeability Test (IS: 2720 PART XVII-1986)/Free Swell Index of Soils (IS: 2720 PART XL-1977)/Measurement of Swelling Pressure of Soils (IS: 2720 PART XLI-1977)/Standard Penetration Test for Soils (IS: 2131-1981, Reaffirmed 2002)/Plate Load Test (IS: 1888–1982)/Visual Soil Classification (ASTM D 2488 and IS: 1498-1970)/Dynamic Cone Penetration Test for Soils (IS: 4968 (Part I)–1976)/References

Audience – B.Tech students of civil engineering and allied branches like geotechnical and agricultural engineering.

ANSYS 2020

Structural Analysis Using the ANSYS Mechanical APDL Release 2020 R1 Environment



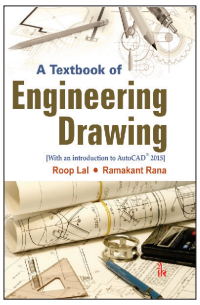
R B Choudary

ISBN: 978-93-90620-46-3/Year 2021
Size: 18 cm × 24 cm/Pages 320
Paperback/₹ 895.00

(See on page 86)

A Textbook of Engineering Drawing

[Along with an introduction to AutoCAD® 2015]

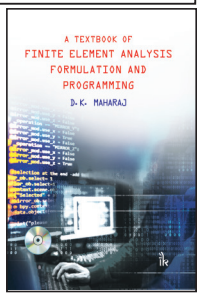


Roop Lal • Ramakant Rana

ISBN: 978-93-84588-68-7/Year 2015
Size 18 cm × 24 cm/Pages 452
Paperback/₹ 445.00

(See on page 82)

A Textbook of Finite Element Analysis



D.K. Maharaj

ISBN: 978-93-86768-22-3/Year 2019
Size 18 cm x 24 cm/Pages 952
Paperback/₹ 995.00

A Textbook of Finite Element Analysis presents detailed finite element formulation for 1D, 2D, 3D trusses, beams, frames, plane stress, plane strain, axisymmetric, 3D problems, plates and shell problems. The book includes chapters on solving finite element equations and numerical integration and a chapter on programming finite element method with input and output for different types of problems. Chapters on advanced topics like heat transfer, fluid flow and torsion, finite element software, variational methods, finite elements in dynamics and vibrations, material nonlinearity and geometric nonlinearity have also been dealt with. Most of the chapters include element formulation with worked out examples, exercises and questions.

Salient Features:

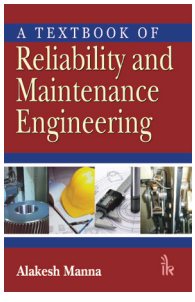
- Isoparametric formulation
- Solution of finite element equations
- Programming finite element method.
- Advance topics
- CD-ROM containing source codes in FORTRAN, input files and output files.

Contents:

Introduction to finite element method/Steps in finite element method/Constitutive relations/Principle of virtual work and energy principles/Isoparametric finite element/Numerical integration/ Solution of finite element equation/Solid under plane stress condition/Solid under plane strain condition/Axisymmetric solids/ Three dimensional solid/Truss and beam finite element/Plate finite element/Variational methods/Heat transfer, fluid flow and torsion/ Finite elements in dynamics and vibration/Shell finite elements/ Programming finite element method/Finite element analysis software packages/Material nonlinearity/Index

Audience – B.Tech, B.E., and M. Tech students of civil engineering.

A Textbook of Reliability and Maintenance Engineering



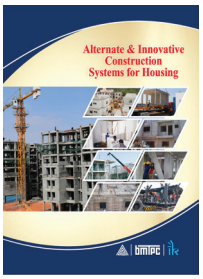
Alakesh Manna

ISBN: 978-93-80578-92-7/Year 2011
Size 18 cm × 24 cm/Pages 420
Paperback/₹ 545.00

(See on page 66)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Alternate & Innovative Construction Systems for Housing



Shailendra Agarwal

ISBN: 978-81-94867-64-7/Year 2021
Size: 18 × 24 cm/Pages 344
Paperback/₹ 425.00

Now is the high time to adopt new construction technologies to fast track and improve the quality of civil constructions. We have to identify innovative housing technologies which are cost effective, speedier, sustainable and disaster-resilient and ensure a higher quality of construction of houses, meeting diverse geo-climatic conditions and desired functional needs. In order to mainstream these new systems in the construction sector there is need to create an enabling ecosystem to facilitate field level applications. The National Building Code of India has also made provisions to ensure utilization of a number of new/alternative building materials and technologies in the construction sector.

Promotion of awareness and extension efforts on new technologies are the key aspects to create an eco-system for usage of these technologies. Therefore, in order to familiarise and create awareness amongst building professionals about the new and emerging building materials and technologies for housing and building construction, the need of the hour today is to introduce a Certificate Course on Innovative Construction Technologies.

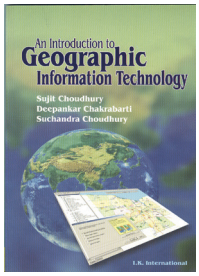
To start any new course, it is necessary to develop the course contents and reading material. As regards, innovative systems, information is available in bits and pieces and there are no textbooks available summarizing all these systems. Therefore, information from various resources has been collected and compiled in concise form to develop this reading material by BMTPC, SPA and resource persons from CPWD, IITs and CSIR laboratories. It is a collection of technical information available on technologies worldwide and it is the first of its kind on the subject. We are sure, it will help the readers to comprehend these innovative systems and implement them in their future construction projects.

Contents:

Introduction to Alternate & Innovative Construction Systems/Alternate & Innovative Construction Systems Explained/Formwork Systems/Stay-in-Place Formwork Systems/Precast Sandwich Panel Systems/Prefabricated Steel & Light Gauge Steel Structural Systems/Precast Concrete Construction Systems/Bibliography/Index

Audience – Civil engineering.

An Introduction to Geographic Information Technology



Sujit Choudhury
Deepankar Chakrabarti
Suchandra Choudhury

ISBN: 978-81-88237-66-1/Year 2009
Size 16 cm × 24 cm/Pages 298
Paperback/₹ 405.00

This book provides a balanced treatment of concepts and techniques required for GIS and Remote Sensing. It focuses on foundation, integration and practical applications of GIS, Remote Sensing, GPS and other areas of Geographic Information Technology. It also considers how the technology works. The book will help the reader develop a thorough understanding of Geographic Information Technology.

The book, presented with examples on the subject, makes the study of any branch of Geographic Information Technology from the broader context of geography in general to spatial information resource management in particular. It gives a wholesome coverage of GIS, Remote Sensing and GPS principles as well as data structures, spatial database modeling and their applications.

Contents:

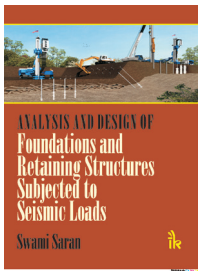
Section I: Conceptual Framework of GIT: Introduction to GIT/History and evolution of GIT/Surveying and mapping/Global positioning system/Projections and co-ordinate systems/Data diversity and standards/Maps and themes

Section II: Geographic Information System: An insight fundamentals of GIS/GIS data models/Data quality/Database management system/Hardware and software/Spatial analysis/GIS and the internet/Annexure: A GIS analytical case study

Section III: Remote Sensing: General background of remote sensing/Techniques of remote sensing/Remote sensing platforms and sensors/Digital image processing/Aerial photographs and photogrammetry/Image interpretation/Glossary/References/Index

Audience – Cartography, Geography, Geology, Environmental Science, and Engineering disciplines GIS.

Analysis & Design of Foundations & Retaining Structures



Swami Saran

ISBN: 978-93-82332-05-3/Year 2012
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 625.00

ISBN: 978-93-81141-77-9/Year 2012
Hardback/₹ 1595.00

The book offers a systematic treatment of the analysis and design of foundations and retaining structures subjected to dynamic loads. Written for graduate students and practising geotechnical engineers, this book is designed to help reader understand the fundamental principles and procedures of analysing and designing geotechnical structures subjected to dynamic loads. Topics covered in the book include: Dynamic soil properties & liquefaction; Dynamic earth pressures shallow, pile and well foundations; rigid and water front retaining structures, bridge abutments; reinforced earth and soils nailed walls. A number of solved examples are included in each chapter. All the formulae, charts and examples are given in SI units. Both analysis and design methodology are based on the latest state-of-the-art and IS codes available on the particular theme.

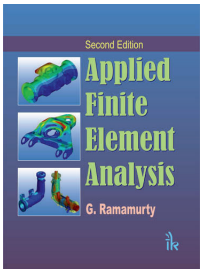
Contents:

Introduction/Dynamic Soil Properties and Liquefaction/Dynamic Earth Pressure/Shallow Foundation/Pile Foundation Subjected to Dynamic Loads/Well Foundations/Rigid Retaining Wall/Seismic Design of Waterfront Retaining Structures/Bridge Abutments/Reinforced Earth Wall/Nailed Side Wall/Index

Audience – Civil Engineering/Geotechnical Engineering course.

Applied Finite Element Analysis

Second Edition



G. Ramamurty

ISBN: 978-93-80578-45-3/Year 2010
Size 18 cm × 24 cm/Pages 448
Paperback/₹ 425.00

This book is presents the basic concepts of Finite Element Analysis applied to several engineering applications.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Salient Features:

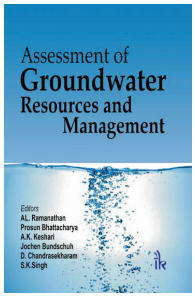
1. Covers several modules of elasticity, heat conduction, eigenvalue and fluid flow analysis which are necessary for a student of Mechanical Engineering.
2. Finite Element formulations have been presented using both global and natural coordinates. It is important for providing smooth transition form formulation in global coordinates to natural coordinates.
3. Special focus has been given to heat conduction problems and fluid flows which are not sufficiently discussed in other textbooks.
4. Important factors affecting the formulation have been included as Miscellaneous Topics.
5. Several examples have been worked out in order to highlight the applications of Finite Element Analysis.

Contents:

Introduction/One-dimensional Elasticity Problems/Analysis of Truss/Analysis of Beams/Steady State Conduction Heat Transfer/ Unsteady State Heat Condition/Two Dimensional Problems of Elasticity/High Order Elements/Steady, Inviscid, Incompressible Flows and Torsion Analysis/Eigenvalue Problems/Three Dimensional Elasticity Problems/Dynamic Analysis/Non-linear Analysis/Bending of Thin Plates/Miscellaneous Topics/Short Questions and Answers/Answers to Selected Problems/Appendix/ References/Index.

Audience – Students of B.E./B. Tech.

Assessment of Groundwater Resources and Management



Editors

AL. Ramanathan • Prosun Bhattacharya
A.K. Keshari • Jochen Bundschuh
D. Chandrasekharam • S.K. Singh

ISBN: 978-81-906757-2-7/Year 2009
Size 18 cm × 24 cm/Pages 518
Hardback/₹ 1495.00

The hydrogeological aspect of groundwater science is universal and applied in nature to have a sustainable water resource development with social, economic, ecological, cultural and aesthetic background. Though 99% of the world's fresh available water is groundwater, yet, the majority of financial resources are directed to surface water found in rivers and lakes. This serious imbalance requires urgent redress. This book addresses the issue to facilitate the joint analysis of groundwater management studies and problems faced by scientists, engineers, managers and other scholars from natural and applied sciences. Significant financial support is required for basic groundwater research if sustainable development is to be a realistic goal. As a freshwater resource, groundwater has major advantages over surface water. This is a basic idea that explicitly appears in almost all papers of this book. The authors have tried to focus their task on those topics which are urgent and relevant and have paid much attention to questions related to management of aquifers, groundwater pollution, the long-term problems and the key issues in developing countries, where majority of world population live and where at present enormous groundwater abstraction occur. This book presents proper information in a systematic scientific manner to make the concept of groundwater management and sustainability understandable to everyone.

This book provides a platform to bring together earth scientists, professionals from chemical and engineering science disciplines, public health professionals and social scientists involved with the management and development of groundwater resources. The book is expected to reflect the current understanding of all the issues related to management of groundwater resources and their sustainable use.

Contents:

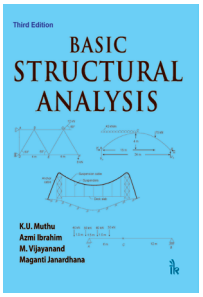
Groundwater Scenario and its Management in Shillong Urban Agglomerate, Meghalaya/Problems and Perspectives used Groundwater Sources in Case of Emergency and Projecting the Drainage in Arid Zone of Central Asia/Sustainable Water Management and Reuse by Natural Treatment Methods/Enhancing the Recharge Capabilities of Aravalli Ridge around the National Capital Territory, Delhi, India/Bangladesh Government Policy in Context of Arsenic Hazards and the Effectiveness of Activated Alumina in Arsenic Mitigation/Management of Groundwater Resources through Community Participation Approach in the Coastal Saline Region of Gujarat/Arsenic Hot Spots Detected in Patna District, Bihar (India) — A Serious Health Hazard for Estimated Human Population of 5.5 Lakhs/Multiple Statistical Analysis forGroundwater Quality Assessment in Marudaiyar Basin, Tamil Nadu/Physico-chemical Characteristics and Determination of Cu(II), Mn(II), Fe(II), Zn(II), Ni(II) and Pb(II) in the Effluent from the Sites of Electroplating Industries of Agra City, India/Nutrient Chemistry of Groundwater of NCT-Delhi, India/Study on Age-old Non-conventional Adit/ tunnel Wells in the Lateritic Terrain of Kasargod District, Kerala/ Methods for Estimation of Replenishable Groundwater Resources Adopted in India/Assessment of Groundwater Reserves: A Case Study/Groundwater Quality and Drastic Vulnerability Assessment of the Aquifers in Aizawl City, Mizoram/Problem of Selenium Toxicity in Nawanshahr and Rao Hoshiarpur Districts of Punjab State, India/Impact of Watershed Development in Groundwater Augmentation in India/Predictive Model for Aquiferous Units and Quality of Underground Water in Onitsha Metropolis, Anambra Basin, Nigeria/Methods of Artificial Recharge of Groundwater/ Hydrogeological Investigations in Pathri Watershed, Uttarakhand, India Using an Integrated Isotopic Technique/Sustainable Lei-Drainage Groundwater of Rawalpindi-Islamabad (North Pakistan) and the Potentials of Recharge/ Groundwater Modeling for an Aquifer Storage Recovery Well under Cotton Wheat Cultivation/ Delineation of Groundwater Zone by Magnetics in Basement Complex, West of Cuddapah Basin, India/ Investigation of Aquifer Remediation Strategies by Coupled Finite Element Model for Groundwater Flow and Contaminant Transport/Infiltration Model for Safe Fly-ash Disposal in the Compound of IB Thermal Power Plant, Orissa, India/Stochastic Algorithm for Simulation of NAPL Dissolution and Degradation Reactions in Porous Media/Modeling of Riverbed Aquifer with Radial Collector well and Stream Recharge Using Modflow and Analytic Element Method: A Case Study/Role of Subsurface Colloids in Groundwater Contamination/GIS Based Water Balance Model of Rift Valley Lakes, Ethiopia/Groundwater Resources Development in the Western Ghats, India/Groundwater and Water Scarcity—Legislation and Litigation: A Tamil Nadu Experience/ Groundwater Quality Assessment in Tsunami Affected Tamil Nadu Coast, India: A Case Study along Coleron to Karaikal/Evaluation of Groundwater Quality for Irrigation and Drinking Purposes in Selected Taluks of Dakshina Kannada District in Karnataka, India/ Remedy for Arsenic Poisoning/A Quest in an Unconventional Area of Research/Adsorptive Removal of Arsenate and Arsenite Ions from Groundwater Using Iron (III)-loaded Resin/Removal of arsenate Ions from groundwater using an Anion Exchanger Derived from Tamarind Fruit Shell/Arsenic and Fluoride in Groundwater: an emerging problem in north eastern India/A Simple Electrocoagulation Setup for Arsenite Removal from water/Variation in Concentration of Fluoride in Groundwater of South west District of NCT Delhi : A Case Study/Newly Developed Absorbent for Arsenic Removal from Groundwater/Arsenic Linkage in the Irrigation Water-Soil-Rice Plant Systems/Surveillance, Hydrogeochemistry, and Methods for removal of Fluoride Contamination in Groundwater: Case Study from Kerala, India/Arsenic Contamination in Groundwater Resources in Kathmandu Valley/Groundwater Scenario of Kalahandi District, Orissa, India/A Decision Support Tool to Explore Conjunctive Use Options in Canal Command/Bioaccumulation and Aquatic Food Chain-emerging Issues in Heavy Metal Toxicity/Groundwater

Quality Monitoring in the Vicinity of Pirana Landfill Site, Ahmedabad, India: Adequacy of Conventional Hydrochemical Approach/Recent Developments in Analytical techniques for monitoring Inorganic Pollutants in Groundwater Samples/Study of Medium Strength Wastewater Using Two-Stage Biological Treatment (Biotower Followed by Activated Sludge Process)/Hydrogeochemistry of Fluoride Contamination in Groundwater of Dungarpur District, Rajasthan/Index.

Audience – Earth scientists, professionals from chemical and engineering science disciplines, public health professionals and social scientists.

Basic Structural Analysis

Third Edition



K.U. Muthu • Azmi Ibrahim
M. Vijay Anand • Maganti Janardhana

ISBN: 978-93-85909-57-3/Year 2017
Size 18 cm × 24 cm/Pages 776
Paperback/₹ 625.00

The third edition of this well-accepted textbook continues in its tradition of presenting the applications of principles, with the addition of a new chapter "Double Integration Method" for a complete treatment on the "Analysis of Determinate Structures''. The inclusion of this chapter makes the reader to understand the development of deflection analysis. This book continues to cater to the needs of the student who enters the portals of Civil Engineering Department in the second year of UG programmes and will also be useful to understand the basic principles of structural analysis, energy principles, concepts of loads, arches, bridges, beams, analysis of statically determinate structures, and importance of influence line diagrams in analyzing problems on indeterminate beams. Moreover, the book can solve basic structural engineering problems in an easy-to-follow and simple manner, avoiding unnecessary mathematical gymnastics and, instead, emphasizing on the engineering applications.

The book takes an outcome-based learning approach, where the authors ensure that the students engage well with the contents of each chapter and the expected learning outcomes are achieved by them. Realizing the importance for a systematic approach to problem solving, Bloom's Taxonomy has been applied while designing the contents of the book, so that the students systematically learn to remember, understand, analyze, apply, evaluate and create learning. A large number of practical problems from various university and competitive examinations, presented in the book, will help students get a feel of the problems encountered in the real world. These will also help them during taking their own examinations.

Salient Features:

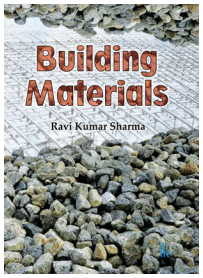
- Third edition presents updated chapters and inclusion of a new "Double Integration Method" extends the scope of the book
- Every topic is illustrated with a large number of worked out numerical examples
- Contains problems from university and competitive examinations
- Provides exercises in every chapter in an orderly way for self-study

Contents:

General Introduction/Framed Structures/Double Integration Method/Moment Area Method/Conjugate Beam Method/Strain Energy Method/Moving Loads and Influence Line Diagram/Three Hinged Arches/Cables and Suspension Bridges/Propped Cantilever Beams/Fixed Beams/Continuous Beams/Influence Lines for Indeterminate Beams/References/Index

Audience – Undergraduate students.

Building Materials



Ravi Kumar Sharma

ISBN: 978-93-86768-66-7/Year 2019
Size 16 cm × 24 cm/Pages 332
Paperback/₹ 315.00

Building Materials imparts in-depth knowledge to the students about the subject. It deals with all the relevant information regarding stones, bricks and tiles, lime, cement, aggregates, mortar and concrete, timber, metals, paint and varnish, bituminous products, and miscellaneous materials. The illustrations and sketches of the materials and techniques have been included as per relevant Indian standards. Suitable concrete mix design techniques have been illustrated with appropriate examples. An exclusive chapter has been included on the utilization of waste materials in construction. The material characterization techniques generally used by the engineers have been discussed with suitable illustrations to provide basic knowledge. Sufficient number of questions are given at the end of each chapter to enable the students to prepare for the examinations.

Salient Features:

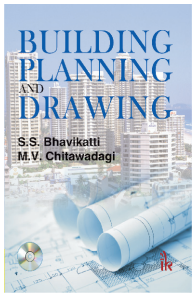
- Illustrative photographs and figures of experimental set-up
- Thorough understanding of construction materials.
- Knowledge of designing concrete mix.
- Utilization of waste materials in construction.
- Material characterization using X-ray diffraction and SEM techniques.

Contents:

Stones/Bricks and Tiles/Lime/Cement/Aggregates/Mortar and Concrete/Timber/Metals/Paint and Varnish/Bituminous Products/Miscellaneous Materials/Use of Waste in Construction and Material Characterization/References/Index

Audience – Civil engineering diploma and degree courses.

Building Planning and Drawing



S.S. Bhavikatti • M.V. Chitawadagi

ISBN: 978-93-82332-56-5/Year 2014
Size 18 cm × 24 cm/Pages 272
Paperback/₹ 465.00

The book deals with planning of buildings keeping in view good ventilation, thermal comfort, and acoustic requirements apart from satisfying minimum standards and rules and regulations of local authorities, economy and future expansions are also taken care of in the building planning. Drawings are made to give clear details of the buildings. The book explains detail in making building drawings with the aid of computer. This book covers the requirement of Building Planning and Drawing course of diploma as well as degree courses. The practising engineers will also find it as an excellent reference book.

To understand the commands of AutoCAD and use them, the sequential procedure and steps involved while drawing plan, elevation and section are stored as screen captures and collection of these screen shots are placed in a CD which is enclosed with this book.

Contents:

Introduction/Types of buildings based on occupancy/Types of residential buildings/Basic concepts of building elements/Methods of construction/Cost-effective building techniques in construction/Construction management techniques/Site selection for residential

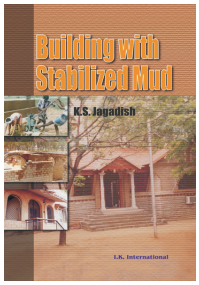
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

buildings/Influence of climate on building planning/Orientation of building/Principles of building planning/Building by-laws/Planning of residential buildings/Planning of public buildings/Building services/Building drawing/Computer aided building drawing/ Typical drawings/Appendix/Index

Audience – Civil engineering diploma and degree courses.

Building with Stabilized Mud



K.S. Jagadish

ISBN: 978-81-89866-21-1/Year 2007
Size 14 cm × 21.5 cm/Pages 104
Paperback/₹ 165.00

Building construction using stabilized mud (soil) has been in vogue in different parts of the world for nearly six decades. However, the desirable practices have not been placed on a firm footing due to sporadic nature of the constructions. The situation is complicated due to the highly variable nature of soil as a construction material. This monograph is an attempt to summarise the best practices for the use of stabilized mud. It is essentially based on the experience at ASTRA (Application of Science and Technology to Rural Areas) and Dept. of Civil Engineering. Indian Institute of Science, for more than three decades.

Contents:

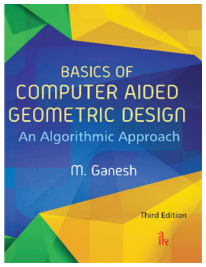
Introduction/Selection Materials/Compaction of Soils/The Mud Block Press: Mardini/The Process of Block Manufacture/Maintenance of the Mud Block Press: mardini/Evaluation of Stabilized Mud Blocks/Wall Construction with Stabilized Mud Blocks/Cost Analysis of Stabilized Mud Block Walls/Building with Unstabilized Mud/Alternatives in Stabilized Block/Rammed Earth/ Spread of Stabilized Mud Construction in Karnataka and India/References.

Audience – Civil Engineers, Architects, Practitioners in Mud Construction.

Basics of Computer Aided Geometric Design

An Algorithmic Approach

Third Edition

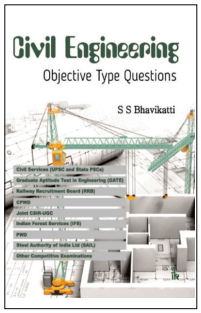


M. Ganesh

ISBN: 978-93-84588-41-0/Year 2019
Size 18 cm × 24 cm/Pages 314
Paperback/₹ 545.00

(See on page 27)

Civil Engineering
Objective Type Questions



S.S. Bhavikatti

ISBN: 978-93-84588-31-1/Year 2015
Size 18 cm × 24 cm/Pages 720
Paperback/₹ 625.00

The book incorporates all major topics in the civil engineering discipline and is written to serve as a refresher course with each topic presented briefly followed by an exhaustive set of objective type questions with keys for important questions at the end. It serves as a quick reference designed to help BE/B Tech undergraduate students and for practising engineers. It will also help in preparing for various competitive examinations:

• Civil Services (UPSC and State PSCs) • Graduate Aptitude Test in Engineering (GATE) • Railway Recruitment Board (RRB) • CPWD • Joint CSIR-UGC • Indian Forest Services (IFS) • PWD • Steel Authority of India Ltd (SAIL) • Other Competitive Examinations

Salient Features:

- 19 most important civil engineering topics ranging from basic to most advanced
- 3000+ objective type questions
- Brief description of important theorems
- Derivations of important functions, relationships and equations
- Diagrams and tables to illustrate important civil engineering concepts

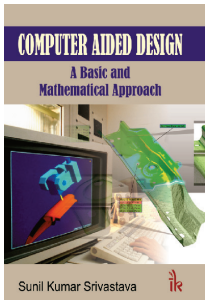
Contents:

Materials of construction/Building construction/Surveying/ Engineering mechanics/Strength of materials/structural analysis/ R.C.C. Design (As Per IS : 456-2000)/Steel structures (As Per IS : 800-2007/Fluid mechanics/Hydraulic machines/Irrigation engineering/ Soil mechanics and foundation engineering/Environmental engineering/Highway engineering/Railway engineering/Tunnelling/Docks and harbour engine ring/Bridge engineering/Airport engineering/ Index

Audience – BE/B.Tech and various competitive examinations including GATE and IES.

Computer Aided Design

A Basic and Mathematical Approach



Sunil Kumar Srivastava

ISBN: 978-93-81141-66-3/Year 2012
Size 18 cm × 24 cm/Pages 424
Paperback/₹ 505.00

The book, designed for the undergraduate and postgraduate semester courses on Computer Aided Design (CAD) in Mechanical, Civil and Computer Science and Engineering, provides introduction and basics of CAD systems, hardware and software requirements, mathematical background on 2D primitives, 2D & 3D geometric transformations, parallel and non-parallel projections, planar and space curves, and 3D graphics. Supported by sufficient number of systematically solved examples with line sketches, it will inculcate better understanding and interest in CAD among the common engineering students.

Salient Features:

- Suitable line sketches and plots
- Large number of solved examples supported by suitable graphics
- Exhaustive coverage of computer graphics systems, its hardware and software requirements
- Exclusive coverage of parallel and non-parallel projections
- Presentation and mathematical work for planar and synthetic curves
- Rich pedagogy of:
- 275 line diagrams and graphical views
- 25 tables
- 55 solved examples with graphical views
- 222 review questions including theory and problems

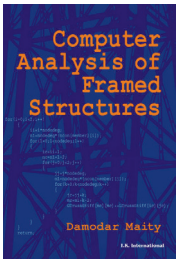
Contents:

Introduction/Computer Graphics Systems/Output Primitives/ Two-Dimensional Geometric Transformations/Three-Dimensional Geometric Transformations/Projections/Plane Curves/Space Curves/3-D Graphics/Review Questions/Index.

Audience – Students of UG & PG Mechanical, Civil and Computer Science and Engineering.

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Computer Analysis of Framed Structures



Damodar Maity

ISBN: 978-81-89866-19-8/Year 2007
Size 16 cm × 24 cm/Pages 248
Paperback/₹ 475.00

Computer Analysis of Framed Structures aims at developing the skills of basic knowledge of computer programming combined with structural analysis. It does this by presenting the concept of computer modeling of real-life structures by focusing on modern matrix method of analysis along with the use of computer codes in C language. This book would also help in making the use of various civil and mechanical engineering softwares like STAAD. Pro, SAP, ADINA, ANSYS, NISA and STRAP for computer-aided designing of structures easy.

Contents:

Introduction/Concepts on Computer Analysis of Structures/Matrices Related to Structural Analysis/Flexibility Method/Stiffness Method/Computer Analysis of Framed Structures/Index.

Audience – Civil and Mechanical Engineering students.

Concrete Technology



S.S. Bhavikatti

ISBN: 978-93-84588-67-0/Year 2015
Size 18 cm × 24 cm/Pages 362
Paperback/₹ 465.00

The book is intended to help students of civil engineering and practicing civil engineers to understand the theoretical and practical aspects of concrete technology. It includes the latest specifications and regulations of Indian Standards (IS) for concrete construction and mix design.

The book includes 17 chapters covering introduction to concrete structures, properties and requirements of constituents of concrete including the role of various admixtures to get special properties. The properties of fresh concrete and hardened concrete and the method of testing them as per IS codes are explained in detail with neat sketches. The concrete mix design procedure as per latest IS provisions of IS 10262:2009 is explained and illustrated with examples for normal concrete as well as for fly ash mixed concrete. Concreting under challenging environments, quality control and repairs and rehabilitation of concrete structures are discussed thoroughly.

Salient Features:

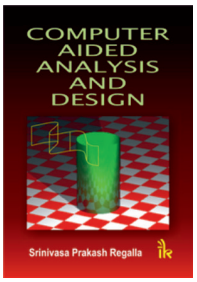
- Covers the theory with simple and precise explanation
- Text illustrated with generous use of diagrams, latest photographs and tables
- Incorporates mix design procedure as per IS 10262:2009
- Quality control of concrete explained systematically
- Repair and rehabilitation of concrete structures is illustrated in detail.

Contents:

Introduction/Cement/Aggregates/Water/Admixtures/Construction chemicals/Concreting/Properties of fresh concrete/Properties of hardened concrete/Tests on hardened concrete/Concrete mix design/Mass concrete/Ready mixed concrete/Special concrete/Concreting under challenging conditions/Quality control of concrete/Repairs and rehabilitation of concrete structures.

Audience – B. Tech/M. Tech students of Civil Engineering.

Computer Aided Analysis and Design

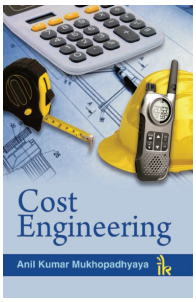


Srinivasa Prakash Regalla

ISBN: 978-93-80026-45-9/Year 2010
Size 16 cm × 24 cm/Pages 280
Paperback/₹ 345.00

(See on page 31)

Cost Engineering



Anil Kumar Mukhopadhyaya

ISBN: 978-93-82332-99-2/Year 2014
Size 16 cm × 24 cm/Pages 128
Paperback/₹ 315.00

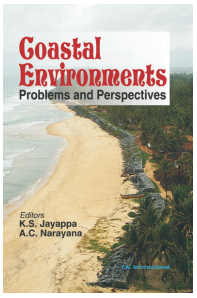
(See on page 89)

Coastal Environments

Problems and Perspectives

Editors

K.S. Jayappa • A.C. Narayana



ISBN: 978-93-80026-28-2/Year 2009
Size 16 cm × 24 cm/Pages 296
Hardback/₹ 995.00

(See on page 234)

Design and Drawing of Steel Structures



S.S. Bhavikatti

ISBN: 978-93-82332-12-1/Year 2012
Size 18 cm × 24 cm/Pages 212
Paperback/₹ 365.00

A structural design can be executed only after drawings are supplied to the site engineers and the technical staff. Hence, it is very important that a design engineer should be provided with correct drawings. Due to this importance civil engineering students are taught not only design but drawing also. Design of steel structures as per IS: 800-2007 is briefly presented along with detailed drawings. Students of civil engineering will find it useful for understanding the course Design and Drawing of Steel Structures.

Contents:

Philosophy of Limit State Design/Bolted Connections/Bolted Beam Connections/Welded Connections/Welded Beam Connections/Tension Members/Compression Member/Beams/Roof Trusses/Plate Girder/Gantry Girders/Index

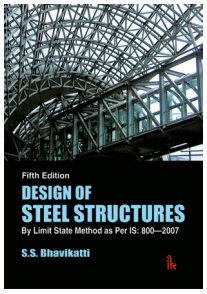
Audience – Civil Engineering.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Design of Steel Structures

By Limit State Method as Per IS: 800-2007



Fifth Edition

S.S. Bhavikatti

ISBN: 978-93-85909-55-9/Year 2017
Size 18 cm × 24 cm/Pages 476
Paperback/₹ 525.00

This new, fifth edition of an extremely popular textbook continues in its tradition of presenting design procedures using a simple language, neat sketches and abundant solved problems. This book is aimed at training the students in using IS:800–2007 for designing steel structures using the limit state method. The author has explained the provisions of code in a simple language and illustrated the design procedure with a large number of worked out problems.

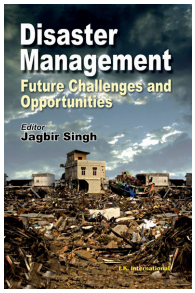
Contents:

Introduction/Principles of Limit State Design/Bolted Connections/ Welded Connections/Design of Tension Members/Design of Compression Members/Design of Beams/Design of Bolted Beam Connections/Design of Welded Beam Connections/Design of Plate Girders/Design of Gantry Girders/Design of Roof Trusses/Plastic Analysis of Beams and Frames/Design of Beam Columns/Appendix/ Index.

Audience – Undergraduate and Postgraduate students of engineering (B.E. /B. Tech)

Disaster Management

Future Challenges and Opportunities



Editor

Jag-bir Singh

ISBN: 978-81-89866-46-4/Year 2007
Size 18 cm × 24 cm/Pages 364
Paperback/₹ 525.00

The speed and enormity of sudden disasters has forced man to react in a speedy way to come to the rescue of the people involved. The following factors are necessary to accomplish this. The exact location of the disaster site and the type of disaster, as these determine the sort of aid required.

This book will provide a broad range of critical and practical ideas and intensive information with latest data regarding Disaster Management at local, regional, national and international levels. The importance of Warning systems, Remote Sensing, GPS (Global Positioning System) and GIS (Geographical Information System) can't be overemphasized as with highly trained people understanding and using these equipment, many thousands of lives will be saved in the future.

Contents:

Section 1: Natural Disaster Management: Fire Disaster: Challenges, Opportunities and its Management–A Case Study of Australia/ Challenges of Flood Disaster Management: A Case Study Noida/ Case Study Noida/Global Warming: Challenges for Food Security in India/Landslide Disasters and its Management/Flood Disaster: Its Impact, Challenges and Management in India/ Earthquake Hazard Management.

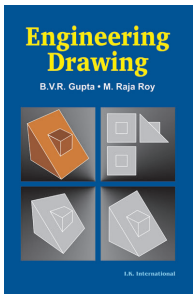
Section 2: Man Made Disasters: Temporal Transport Hazard Dynamics: A Case Study of Delhi/Solid Waste Management: Post-Disaster/Preliminary Assessment of Impact of Tsunami on the Nutrient and Sediment Dynamics in the Pichavaram Mangrove Ecosystem, India/AIDS: Health Disaster, Challenges and its Management in Delhi/A Threat of Bio-terrorism in Mega Cities/ Antibacterial Activity of Some Botano-Extracts Against Plant Pathogenic Bacteria *Pseudomonas syringae*/Technological Hazards: Man-Made Disasters/Climate Change and Vulnerability of Coastal Mega Cities/Fire Hazard Management in Urban Areas.

Section 3: Role of Technology in Disaster Management: Future Applications and Challenges of Remote Sensing, GPS and GIS in Disaster Management in India/Fire Disaster and its Possible Management through GIS Technology in Delhi/Avalanches Problem in India and the Role of GIS, Remote Sensing and Information Technology in its Mitigation.

Section 4: Community Preparedness: Vulnerability Analysis and Mitigation: Key to Disaster Management/Partnership Development with VBOs in Disaster Management in Delhi/The Impact of Tsunami on the Groundwater Quality in Tamilnadu, South East Coast of India/ Role of Tourism Business Firms in Disaster Management Strategies/ Impact of Tsunami on Coastal Zones/ Challenges and Opportunities to Disaster Management in India.

Audience – Disaster Management Students.

Engineering Drawing

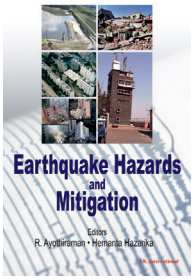


B.V.R. Gupta • M. Raja Roy

ISBN: 978-81-906757-9-6/Year 2008
Size 18 cm × 24 cm/Pages 224
Paperback/₹ 475.00

(See on page 92)

Earthquake Hazards and Mitigation



Editors

R. Ayothiraman
Hemanta Hazarika

ISBN: 978-81-89866-77-8/Year 2008
Size 28 cm × 22 cm/Pages 576
Hardback/₹ 2225.00

This book contains 5 keynote lectures, 11 invited lectures and 44 contributed papers presented in the workshop under the following broad themes:

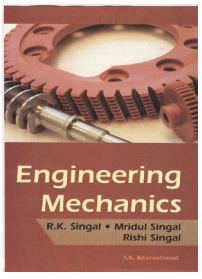
1. Engineering Seismology and Seismic Hazard
2. Earthquake Geotechnical Engineering
3. Structural Earthquake Engineering
4. Other Related Issues

It will be of extreme interest to engineers, researchers, scientists, faculty members and students working in these areas.

Audience – Postgraduate and professionals in Geotechnical Engineering and Structural Earthquake Engineering.

Engineering Mechanics

Revised and Updated



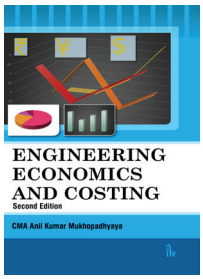
R.K. Singal • Mridul Singal
Rishi Singal

ISBN: 978-81-907462-1-2/Year 2012
Size 16 cm × 24 cm/Pages 494
Paperback/₹ 495.00

(See on page 93)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Engineering Economics and Costing



Anil Kumar Mukhopadhyaya

ISBN: 978-93-90620-15-9/Year 2021
Size: 16 cm × 24 cm/Pages 210
Paperback/₹ 275.00

Engineering Economics and Costing focuses on two most important components of Cost and Economics for engineers. Engineers should have the knowledge of cost – how the cost elements are built up in different industries like, manufacturing industries, process industries and even job shops. The underlying belief is that only with the pertinent knowledge engineers can control and improve cost. The interesting thing is that they are the creator of cost. There are some core competencies which should also be known to them. Those core competencies are essential for better Cost Management. These core competencies are:

- Cost Model; Cost Estimate;
- Pareto Diagram; Ishikawa Diagram;
- Payback Period; Return on Investment;
- Discounted Cash Flow; Internal Rate of Return;
- Make or Buy Decision
- Life Cycle Costing.

In addition to above, the engineers should also have knowledge of the following techniques.

- Target Costing;
- Design to Cost and
- Should Costing.

At the end of each chapter, objective type questions and the problems with answers have been provided. This book is user friendly and focuses on building an affinity for cost.

Contents:

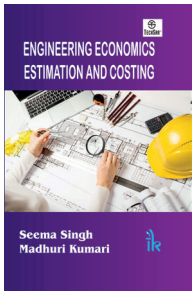
Part I: Cost Engineering: Introduction/Elements of Cost/Direct Material Cost/Direct Labour Cost/Direct Expenses/Overhead/ Methods of Costing/Standard Costing

Part-II: Engineering Economics: Concepts, Methods and Techniques Types of Costing/Methods/Target Costing/Design to Cost/ Should Costing/Should Cost Analysis/Bibliography/References/ Appendix/Glossary/Index

Audience – B. Tech Civil/ M. Tech, Civil Engineering students and Professionals.

Engineering Economics, Estimation and Costing

New



Prof. Seema Singh
Prof. Madhuri Kumari

ISBN: 978-93-90620-08-1/Year 2022
Size: 18 cm × 24 cm/Pages 308
Paperback/₹ 425.00

Engineering Economics is essential for civil engineers to understand the importance and fundamentals of estimation and costing for measuring quantities of construction materials using traditional methods involved in the projects/works.

This book is very exhaustive and covers a wide range of topics of public sector economics, monetary, economics, economics, public finance, managerial economics engineering economics, and a brief account of Indian economy. It further covers estimation, measurement of various work items of construction projects and costs. Detailed specifications of different structures, details of rate analysis, tenders, bids and various Acts, compensations, and arbitrations about construction projects are described in a structure form.

As a civil engineer it is very important to have good understanding of estimation and costing of a construction project. The syllabus is very exhaustive and covers a wide range of topics. The book can also be used as a textbook for students of Construction Management, Infrastructural Engineering/ management courses of Economics in MBA. All nine modules of the AICTE syllabus have been mapped into eight chapters of this book. The ninth modules (one lecture) of the AICTE syllabus that deals with workers has been incorporated into chapter 2 which also deals with labour and labour market.

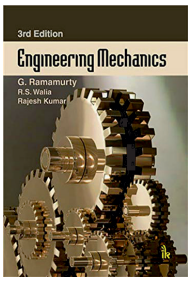
Contents:

Introduction to Basic Principles of Economics/Estimation/ Measurements for various items/More on Economic Issues/ Specifications/Managerial Economics/Rate Analysis/Indian Economy/Tender/Index

Audience: B.E. &B. Tech Student.

Engineering Mechanics

Third Edition

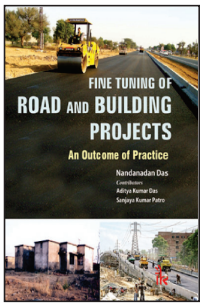


G. Ramamurty • R.S. Walia
Rajesh Kumar

ISBN: 978-93-86768-09-4/ Year 2018
Size 18 cm × 24 cm/Pages 456
Paperback/₹ 545.00

(See on page 93)

Fine Tuning of Road and Building Projects: An Outcome of Practice



Nandanandan Das

Contributors:
Aditya Kumar Das
Sanjaya Kumar Patro

ISBN: 978-93-84588-74-8/Year 2016
Size 18 cm × 24 cm/Pages 168
Hardback/₹ 995.00

The basic concepts of highway and building engineering have been getting significantly changed and updated. Developments in road and building technology and operations are now available to designers, builders and operators and building owners who want to maximize both economic and environmental performances. The book is based on empirical practices and experiences of individual engineers, with an approach of emphasizing on the theoretical aspects. In India several organizations namely, Central Road Research Institute (CRRI), Ministry of Road Transport and Highway (MORTH), Indian Road

Congress (IRC), Central Building Research Institute (CBRI), Bureau of Indian Standards (BIS), Public Works Department (PWD) along with some educational institutions are contributing knowledge and newer concepts to the field of highway and building engineering.

The purpose of this book is to gather and present practical solutions to the problems which are arrived by Dr Nandanandan Das, Author due his thirty five years & more long vast service experience and these were formulated by the co- Authors for the students to inculcate during their study of engineering to overcome such problems if faced during execution. The authors' objective is to prepare this book to introduce the subject of fine tuning of engineering challenges of road and building projects to the students in a systematic manner. Besides being useful to the Civil Engineering students in general, the book will also be uselful to PG students studying highway engineering as subject, field engineers, consultants, and researchers.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
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Contents:

Part I - Transportation

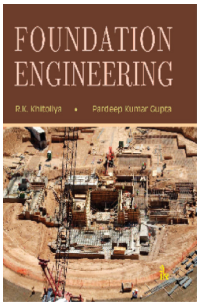
Pre-Construction Development and Planning/Construction and Supervision/Engineering Challenges on Controlling Road Accident: Case Study/Construction of Road in Water Logged Highway Stretch: Case Study-II/Road Without Drain A Great Disaster: Case Study-III/Engineering Challenges in Completing Projects technically and tactfully in time: Case Study/Maintenance of Road/Principles on Construction of Road/Engineering Challenges for Solving Critical Problems on Road Project: Case Study/Problems and Sucessful solutions on Road Project: Case Study./Engineering Challenges Solving Critical Problems of Flood: Case Study

Part II – Building Systems

Defects of Building/Construction of Cyclone Resistance Building/Engineering Challenges in Design and Execution of Building in Expansive Soil: A Case Study/Construction of Leak Proof Roof With Green Concrete/Technically Construction of Building Avoiding Disadvantage of Vastu Shastra/Preventive Measures For Long Lasting Houses/Development Through Mass Engineers and Individual/References

Audience – Post Graduate students/Field Engineers/Consultants/Researchers.

Foundation Engineering



R.K. Khitoliya
Pardeep Kumar Gupta

ISBN: 978-93-84588-61-8/Year 2015
Size 18 cm × 24 cm/Pages 600
Paperback/₹ 575.00

Foundation Engineering is the second book in the series on Geotechnical Engineering published in 2014 to meet the requirements of undergraduate students. This book covers various aspects of foundation engineering bringing together all the relevant theories. The concepts have been developed systematically. The aim of the book is to present the basic of various topics in an easy way. It serves as a guide for practicing engineers also.

Salient Features:

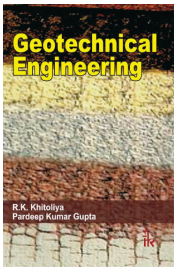
- Provides large number of illustrative examples and solution
- Contains enough practice exercise and descriptive questions
- Gives proper references to the relevant Indian standard codes at appropriate places

Contents:

Introduction/Engineering and Geotechnical Properties of Soils/Geotechnical Investigation and in-situ Tests/Shallow Foundation and Bearing Capacity/Safe Bearing Pressure and Settlement Analysis/Combined Footings ad Mat Foundations/Lateral Earth Pressure/Earth Retaining Structures/Deep Foundations and Caisson Foundations/Stability of Slopes/Machine Foundations/Foundations on Difficult Soils/Embankment Dams/Geo environmental Engineering/Design of Pavements/Ground Modified for Foundation/Appendix/Bibliography/Index

Audience – UG and PG students of Civil Engineering and allied areas like transportation engineering, engineering for dams and embankments, construction engineering and so on.

Geotechnical Engineering



R. K. Khitoliya
Pardeep Kumar Gupta

ISBN: 978-93-82332-88-6/Year 2014
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 545.00

The book exhaustively deals with the fundamental principles of soil mechanics and aims to serve the needs of B.E., and B. Tech students of Civil Engineering. It covers the syllabi of almost all technical universities and institutes. The concepts have been developed systematically. A large number of graded numerical examples and solutions are included. References are made to the relevant Indian standard codes at appropriate places.

New concepts like Critical-State Concept, Three-Dimensional Consolidition and Stress Path Method have also been included in the book. The book will be useful for degree & diploma students of Civil Engineering, practising engineers and students appearing in various competitive examinations including AMIE.

The Book broadly deals with:

- Basic Terminology and Interrelations
- Index Properties of Soils
- Soil Classification Systems
- Soil Water and Effectives Stress
- Permeability
- Seepage Analysis
- Stress Distribution in Soil Mass
- Compaction
- Consolidation
- Shear Strength of Soils
- Lateral Earth Pressure and Earth Retaining Structures
- Stability of Slopes

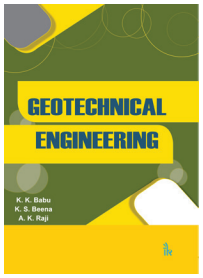
Contents:

Introduction/Basic terminology and interrelations/Index properties of soils/Soil classification systems/Soil water and effective stress/Permeability/Seepage analysis/Stress distribution in soil mass/Compaction/Consolidation/Shear strength of soils/Lateral earth pressure and earth retaining structures/Stability of slopes/References/Bibliography/Index.

Audience – B.E and B. Tech Civil Engineering Students.

Geotechnical Engineering

New



K. K. Babu
K.S. Beena
A. K. Raji

ISBN: 978-93-90620-29-6/Year 2022
Size: 18 cm × 24 cm/Pages 478
Paperback/₹ 495.00

Geotechnical engineering defines soil properties and strength, as well as the mechanics of soil and rocks. It involves other important earth materials like snow, clay, slit and sand. This discipline focuses on the use of scientific methods and engineering principles to interpret the characteristics of the ground to determine suitability for building and construction.

This book serve as a textbook for undergraduate students in Civil Engineering, Mining Engineering, and Engineering Geology. It is written in line with the model syllabus prescribed by All India Council for Technical Education. The book will be equally useful to candidates appearing for competitive examinations and for practising engineers.

Salient Features:

- Theory and concepts are explained briefly with relevant illustrations and figures.
- Variety of numerical problems from previous university and competitive examinations are worked out with explanation
- Mathematical treatment is reduced omitting many derivations.
- Practice problems are given with answers and hints.
- Review theory questions are given at the end of each chapter.
- Multiple-choice questions with answers and hints are given for every chapter. (useful for GATE, IES and other competitive examinations)

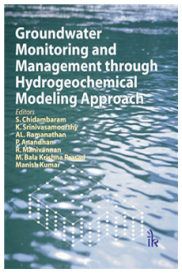
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Contents:

Introduction to Soil Mechanics/Basic Soil Properties/Plasticity Characteristics of Soil/Classification of Soil/Permeability and Seepage/Effective Stress Principle/Compaction of Soil/Stresses in Soil/Consolidation of Soil/Shear Strength of Soil/Stability of Slopes/ Introduction to Soil Exploration/Practical Work/Index

Audience – B.E. & B.Tech student of Civil Engineering, Mining Engineering and Geotechnical Engineering.

Groundwater Monitoring and Management through Hydrogeochemical Modeling Approach



Editors

S. Chidambaram
K. Srinivasamoorthy
R. Manivannan
P. Anandhan
AL. Ramanathan
M. Bala Krishna Prasad
Manish Kumar

ISBN: 978-93-80578-16-3/Year 2010
Size 18 cm × 24 cm/Pages 624
Hardback/₹ 1195.00

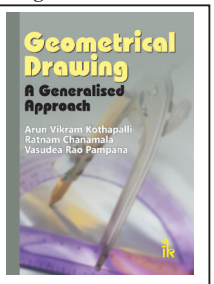
Modeling the fate of chemical constituents such as cations and anions, organic and inorganic ligands, etc., is essential to understand the long-term utility of groundwater for various purposes. The chemical modeling helps to describe the chemical characteristic of an aqueous system to solve a simultaneous set of equations, which explains the equilibrium reactions and mass balance on dissolved element for the output consists of theoretical distribution of aqueous species for dissolved elements. The book in total includes ten papers dealing with the instrumentation techniques for the analysis of various major, minor ions and trace elements and focuses on the geochemical modeling to get a prime idea about the different concepts adopted in modeling and the evolution of different geochemical models. The chapters cover the speciation of different ions, case studies by using inverse and forward modeling in different Indian scenarios, application of GIS and biogeochemical modeling to get a comprehensive overview of the applications of the geochemical models in water research.

Contents:

Approaches and Advancements of Analytical Techniques in Hydrogeochemistry/Basics of Hydrogeochemical Modeling/ An Overview on NETPATH Geochemical Modeling- A Case Study from Coastal Aquifer of Pondicherry/Speciation of Ions in Groundwater and its Applications/Understanding the Groundwater and Surface Water Interactions Through Hydrogeochemical and Multivariate Statistical Modeling Approach/Statistical Methods for Characterization of Water Quality Variables in Hydrogeochemical Studies/Applications of Overlay Analysis Using Geographical Information System in Water Research/Biogeochemical Modeling Of the Aquatic Ecosystems/Contaminant Transport Modeling in Groundwater Management/Rock Water Interaction in Groundwater and Using Geochemical Modelling.

Audience – Teachers, Researchers and Water Management.

Geometrical Drawing A Generalised Approach

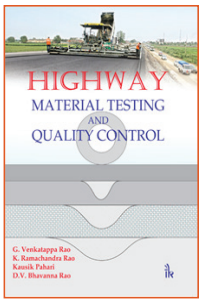


Arun Vikram Kotaphalli
Ratnam Chanamala
Vasudeva Rao Pampana

ISBN: 978-93-82332-02-2/Year 2012
Size 18 cm × 24 cm/Pages 312
Paperback/₹ 405.00

(See on page 97)

Highway Material Testing and Quality Control



G. Venkatappa Rao
K. Ramachandra Rao
Kausik Pahari
D.V. Bhavanna Rao

ISBN: 978-93-82332-65-7/Year 2015
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 445.00

This manual deals with highway material testing procedures with an emphasis on interpretation of results and relates it to practical applications. This manual, besides serving as a basic textbook on highway material testing methods for students at the degree (B.E./B.Tech) and diploma levels (Civil Engineering), would be of immense practical value for field engineers and testing laboratories.

The salient features of this manual include detailed testing procedures following the latest codes and guidelines. Material testing is presented in the manual in an easy-to-follow manner. It is broadly divided into seven modules dealing with soils, aggregates, bitumen, granular and bituminous mix design, quality control, and pavement evaluation.

Other essential features of this manual include: typical results obtained from laboratory and field tests during professional interaction with professionals at work. It also includes ready to use observation sheets for instant interpretation of test results and justification. Review questions are given at the end of each testing procedure for better comprehension and revision.

Powerpoint presentations for all the tests and answers to review questions is available to the Professors and instructors upon request.

The book contains 41 experiments spread in seven sections, namely,

1. Tests on soil sub-grade and aggregates
2. Tests on bituminous materials
3. Soil classification and design
4. Design of granular mixes
5. Design of bituminous mixes
6. Quality control and quality assurance
7. Tests for pavement evaluation

Contents:

Part I: Tests on Soil Subgrade and Aggregates

Introduction/Visual Classification/Grain Size Distribution/Plasticity Limits and Indices/Compaction Test/California Bearing Ratio Test/ In Situ Plate Bearing Test/Petrographic Analysis/Estimation of Deleterious Materials/Soundness Test/Specific Gravity and Water Absorption Test/Sand Equivalent Test/Shape Test/Aggregate Abrasion Test/Aggregate Crushing Strength Test 10% Fines Value Test/Aggregate Impact Test/Determination of Stone Polish Value/In Situ Density Determination by Sand Replacement Method

Part II: Tests on Bituminous Materials

Introduction/Specific Gravity Test for Bituminous Materials/ Determination of Solubility in Carbon Disulphide or Trichloroethylene/ Standard Tar Viscometer Test/Penetration Test on Bitumen/Softening Point Test/Ductility Test on Bituminous Materials/Flash and Fire Point Test/Determination of Loss on Heating/Stripping Value Test/ Fraass Breaking Point Test/Marshall Stability Test/Separation Test for Modified Bitumen/Elastic Recovery Test

Part III: Soil Classification and Design

Indian Standard Soil Classification/Selection of Soils and Compaction Requirement

Part IV: Design of Granular Mixes

Design of Granular Sub-Base and Base

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Part V: Design of Bituminous Mixes

Design of Base and Surface Course

Part VI: Quality Control and Quality Assurance

Quality Assurance and Quality Control

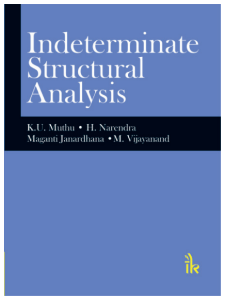
Part VII: Pavement Evaluation

Introduction/Pavement Condition Survey by Straight Edge and Visual Observations/Evaluation of Pavement Roughness by Profilometer/ Benkelman Beam Defl ection/Determination of Skid Resistance Test

References/ Index

Audience – B.E./B.Tech Civil Engineering students

Indeterminate Structural Analysis



K.U. Muthu • H. Narendra
Maganti Janardhana • M. Vijayanand

ISBN: 978-93-82332-60-2/Year 2014
Size 18 cm × 24 cm/Pages 856
Paperback/₹ 795.00

The present book explains the basics of indeterminate structural analysis. It been designed to cater to the needs of the undergraduate students and design engineers. The classical methods viz., slope deflection, moment distribution and Kani's method have been explained in the beginning which form the basis of analysis, followed by the flexibility method and stiffness method using system approach. The introduction of system stiffness approach in a systematic manner makes the student develop an interest in analyzing the complex structures using direct stiffness approach later. The approximate method of analysis of multistorey frames subjected to lateral loads and vertical loads is presented herewith. The approximate analysis includes the portal method, cantilever methods and factor method for lateral loads. Multistorey frames subjected to vertical loads have also been analyzed using the point of inflexion method and substitute frame method. Analyses of two hinged arches and introduction to structural dynamics have also been added.

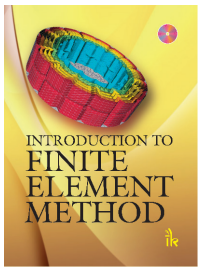
A number of graded illustrative examples are presented which would make the student understand and appreciate the subject in depth.

Contents:

The slope-deflection method/Moment distribution method/Kani's method/Flexibility method – a system approach/Stiffness method – a system approach/Approximate method of analysis/Indeterminate trusses/Basic principles of structural dynamics/References/Index

Audience – Undergraduate civil engineering students and design engineers.

Introduction to Finite Element Method



P.N. Godbole

ISBN: 978-93-82332-20-6/Year 2013
Size 18 cm × 24 cm/Pages 400
Paperback/₹ 525.00

The book discusses the basics of the finite element method in a simple and systematic way. The book will serve as a basic learning tool for the undergraduate and postgraduate students in civil and mechanical engineering whose main interest is to carry out stress analysis. However, the concepts are presented in sufficiently general form so that the book serves as a valuable learning aid for students with other backgrounds, as well as practising engineers.

Salient Features:

- Steps in the finite element method described with examples of bar and CST element.
- A separate chapter on shape functions with large number of examples.
- Isoparametric elements and numerical integration explained in detail.
- Advanced topics on plate and shell elements, non-linear problems and dynamic analysis.
- Educational program of isoparametric elements with explanation of input, output, test example and source code included in the CD appended with the book.
- Detailed appendices on Rayleigh-Ritz method, solution of equations and numerical integration.

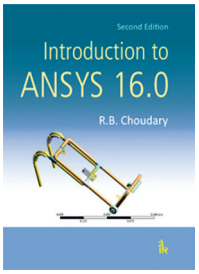
Contents:

Introduction/Element characteristics/Bar and truss problems/C. S. T. element (Two-dimensional problem)/Shape functions/Isoparametric elements and numerical integration/Three-dimensional analysis/ Axisymmetric problems/Beam and frame problems/Elements of plate bending and shell analysis/Non-linear problems/Geometrically non-linear problem/Dynamic considerations/Modeling techniques and software packages/Appendices/Index.

Audience – Undergraduate and postgraduate Civil and Mechanical Engineering courses.

Introduction to ANSYS 16.0

Second Edition



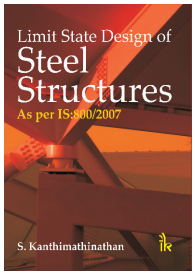
R.B. Choudary

ISBN: 978-93-85909-10-8/Year 2016
Size 18 cm × 24 cm/Pages 332
Paperback/₹ 895.00

(See on page 101)

Limit State Design of Steel Structures

as per IS:800/2007



S. Kanthimathinathan

ISBN: 978-93-82332-78-7/Year 2014
Size 18 cm × 24 cm/Pages 448
Paperback/₹ 595.00

This book is based on Limit State Method as per IS:800:2007.

Any structure from concept to utilization should pass through the following stages:

- Planning
- Structural Configuration
- Structural Analysis
- Structure Design
- Detailed Engineering
- Fabrication

The thrust area of this book is to give more examples which will be useful for the students as well as practising design engineers. The relevant clause numbers of the standards are given there itself to enable the reader to go through the clause of the standards.

There are 13 chapters in this book. Each chapter gives the rationale behind the design of particular component, worked examples with figures and tables.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Broadly the book deals with:

- Structural steel design
- Tension members
- Design of compression members
- Design of flexural members
- Design of column bases
- Welded connections
- Bolted connections
- Calculation of wind load on a structure
- Design of pitched roof truss
- Force due to earthquake at various elevations
- Draft design basis report
- Templates for column and base plate with anchor bolts

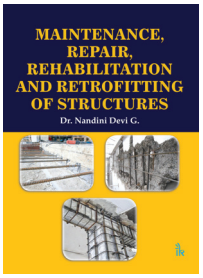
The revised Indian standards IS:800:2007 includes the Limit State Method. This book deals with structural designs based on IS:800:2007, IS:875, IS 1893, SP6(1), IS 816 and IS 1367. The readers are advised to go through these standards for better and clear understanding.

Contents:

List of symbols/Introduction/Design of tension members/Design of compression members/Design of flexural members/Column bases/Welded structural connections/Bolted joint structural connections/Wind load calculation [As per IS 875-Part-3]/Design of roof trusses/Calculation of earthquake load on structures [As per Is:1893-Part-1]/Design basis for analysis and design of boiler supporting steel structure/Codes and templates

Audience – B.E and B.Tech students.

Maintenance, Repair, Rehabilitation and Retrofitting of Structures



Nandini Devi

ISBN: 978-81-948676-5-4/Year 2021
Size: 18 cm × 24 cm/Pages 832
Paperback/₹ 795.00

The book "Maintenance, Repair, Rehabilitation and Retrofitting of Structures" explains elaborately with neat sketches the various types, methods, applications, requirements and guidelines of Maintenance, Repair, Rehabilitation and Retrofitting of Structures and various demolition techniques. It has been prepared keeping in view the syllabuses of various Indian universities. It also includes repair of underwater structures and structural health monitoring. This book contains necessary figures that help even a beginner to understand the concepts and will also be a useful resource for the students as well as practising engineers.

Salient Features:

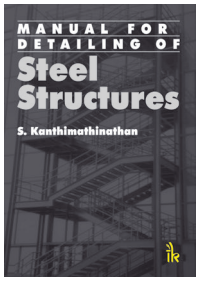
- Detailed procedure for inspection and assessment of structures through various tests as per guidelines.
- Elaborate explanation of the latest special repair materials such as FRP composites.
- Complete repair and strengthening of structures damaged during an earthquake has been discussed.
- Coverage of structural health monitoring and non-destructive testing of concrete structures.

Contents:

Maintenance and Repair Strategies/Deterioration Causes, Inspection and Assessment of Structures/Quality Assurances for Concrete Construction/Serviceability and Durability of Concrete/Corrosion/Special Mortar and Concretes/Shoring and Underpinning/Materials, Techniques for Repair and Protection Methods/Techniques for Restoration and Retrofitting of Structures/Repair Techniques for Structures Damaged During Earthquake/Underwater Repair Materials and Techniques/Demolition Techniques/Structural Health Monitoring/Non-destructive Testing of Concrete/Index*Audience* – B. Tech Civil/ M. Tech, Civil Engineering students and Professionals.

Audience – B. Tech, M.Tech Civil eng. student.

Manual for Detailing of Steel Structures



S. Kanthimathinathan

ISBN: 978-93-81141-44-1/Year 2013
Size 18 cm × 24 cm/Pages 284
Paperback/₹ 385.00

The book provides:

- layout with grid designations and the wire diagram of frames to start with.
- holding down bolts for foundation along with details of such components that are being used.
- all types of base plates such as slab base and stiffened base.
- sections used as columns including built-up columns, battened columns and laced columns and their views.
- how to show a beam, welded and bolted connections details between column & beam and beam to beam.
- tables with all necessary details for cutting the beam, number of bolts required, edge distance, pitch, etc.

All the chapters are structured in such a way as to how a steel structure is erected. All chapters are oriented towards giving all the details required for completion of fabrication drawings for every component.

The book is based on Indian standards with some reference to European and American standards.

This book will be useful for Diploma & Degree courses in Civil & Mechanical Engineering; practising engineering & consultants; structural engineering consulting organizations; fabricators and manufacturing industries; and erectors.

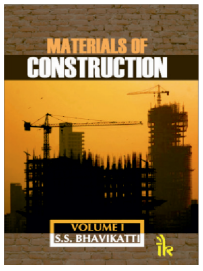
Contents:

Notes/Key Plan and General Arrangement/Column/Base Plate/Holding Down (Anchor) Bolts/Beams/Weld Symbols/Connections/Vertical Bracing/Working Points/Platform/Stiffeners and Seal Plates/Floor Grill/Chequered Plate/Stairs/Ladders/Handrail/Toe Guard Plate/Roof Truss/Roof Sheeting and Accessories/Sag Rods/Crane Rail/Physical Properties of Indian Rolled Shapes/List of IS Codes/Erection Sequence.

Audience – Undergraduate and postgraduate Civil and Mechanical Engineering courses.

Materials of Construction

Volume I



S.S. Bhavikatti

ISBN: 978-93-82332-55-8/Year 2013
Size 13.5 cm × 21.5 cm/Pages 164
Paperback/₹ 295.00

Materials of construction is an important subject for civil engineering students. This subject is taught to the students of Diploma in Civil Engineering in two courses. This book is intended to cover all topics prescribed in the first course.

The book is divided in seven chapters, namely, (1) Stones, (2) Timber, (3) Bricks, (4) Clay Products, (5) Ferrous Metals (6) Non-ferrous Metals, and (7) Alloys.

At the end of each chapter, summary, a set of fill-in-the-blanks type questions and descriptive type questions are provided. At the end of the book multiple choice questions with answers are given. To enhance the ability of the students to answer semester end examination; three model question papers are also given.

It is hoped that students and faculty of polytechnics will find it as a good textbook.

Contents:

Stones/Timber/Bricks/Clay Products/Ferrous Metals/Non-ferrous Metals and/Alloys.

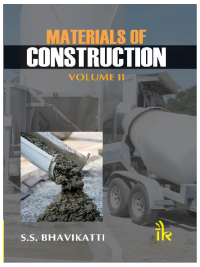
Audience – Civil Engineering diploma students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Materials of Construction

Volume II



S.S. Bhavikatti

ISBN: 978-93-82332-77-0/Year 2014
Size 13.5 cm × 21.5 cm/Pages 168
Paperback/₹ 295.00

Materials of construction is an important subject for Civil Engineering students. This subject is taught to the students of Diploma in Civil Engineering in two courses.

The book is divided in six chapters, namely, (1) Cement, (2) Coarse and Fine Aggregates, (3) Mortar, (4) Cement Concrete, (5) Paints, Varnish and Distemper, (6) Miscellaneous and Modern Building Materials.

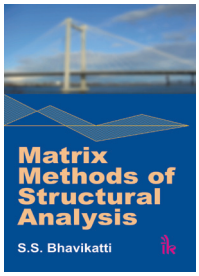
At the end of each chapter, summary, a set of fill-in-the-blanks type and descriptive type questions with answers are given. To enhance the ability of the students to answer semester end examination five model question papers are also given.

Contents:

Cement/Coarse and fine aggregates/Mortar/Cement Concrete/Paints, varnish and distemper/Miscellaneous and modern building materials.

Audience – Civil Engineering diploma students.

Matrix Methods of Structural Analysis



S.S. Bhavikatti

ISBN: 978-93-81141-35-9/Year 2011
Size 16 cm × 24 cm/Pages 182
Paperback/₹ 315.00

Preliminary chapters are supposed to give suitable transition from structural analysis—classical methods studied by students in their compulsory courses. Then structure approach to matrix method is dealt with so that the students get clear picture of matrix approach. Finally, stiffness matrix method—element approach is explained and illustrated so that before developing computer program student will understand what to instruct computer. Finally, a chapter on computer programming preliminaries which will help to develop the computer program and cautions the users of programme developed by the others is included.

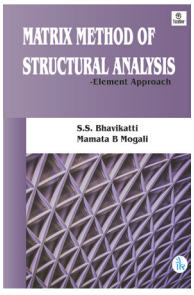
Contents:

Introduction/Review of Consistent Deformation and Slope Deflection Methods/Flexibility Matrix Method: Structures Approach/Stiffness Matrix Method: Structures Approach/Introduction to Element Approach/Computer Programming Preliminaries/Appendix/Index

Audience – Undergraduate and postgraduate students of Civil Engineering.

Matrix Method of Structural Analysis: Element Approach

New



S.S. Bhavikatti
Mamata B Mogali

ISBN: 978-93-90620-81-4/2023
Size 16 cm × 24 cm/Pages 136
Paperback/₹ 215.00

The structural analysis deals with the determination of the response of the structure subjected to loads. The rapid development of computers and the need for complex and lightweight structures led to the development of the matrix method of structural analysis.

The readers of this book should be familiar with consistent deformation and slope deflection methods of structural analysis. The systematic development of these methods to suit computer applications gave rise to Matrix Method of Structural Analysis. The development of consistent deformation method led to Flexibility Matrix Method, while the development of slope deflection method led to Stiffness Matrix Method.

The book deals with the subject in four chapters starting from the Introduction; Flexibility Matrix Method: Element Approach; Stiffness Matrix Method: Element Approach; and Computer Programming Preliminaries. One Appendix Matrix Algebra Review is also given at the end of the book. This book will be a useful reading for students of civil engineering.

Contents:

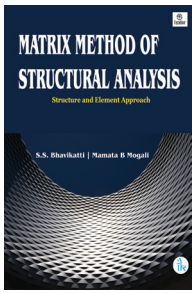
Introduction/Flexibility Matrix Method: Element Approach/Stiffness Matrix Method: Element Approach/Computer Programming Preliminaries/Appendix: Matrix Algebra Review/Index

Audience: B.E & B.Tech students of Civil Engineering

Shelving: Civil Engineering

Matrix Method of Structural Analysis: Structural and Element Approach

New



S.S. Bhavikatti
Mamata B Mogali

ISBN: 978-93-90620-91-3/2023
Size 16 cm × 24 cm/Pages 216
Paperback/₹ 345.00

Matrix Method of Structural Analysis is an essential topic for all universities.

This book covers all important topics in 7 chapters. Chapter 1 Introduction, that explain the statics Indeterminacy and Kinematic Indeterminacy, chapter 2, Consistent Deformation and Slope Deflection Methods, Chapter 3 Flexibility Matrix Method: Structures Approach, Chapter 4 Stiffness Matrix Method: Structures Approach, Chapter 5 Flexibility Matrix Method: Element Approach, Chapter 6 Stiffness Matrix Method: Element Approach, And Chapter 7 Computer Programming Preliminaries. This Book will be a useful reading for student of civil engineering.

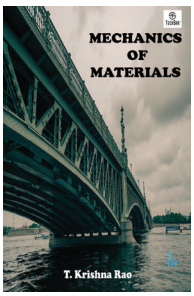
The readers of this book are familiar with consistent deformation and slope deflection methods of structural analysis. The systematic development of these methods to suit computers application gave rise to Matrix method of Structural Analysis. The development of consistent deformation method led to flexibility Matrix Method, while the development of slope deflection method led to Stiffness Matrix Method.

Mechanics of Materials

Dr. T. Krishna Rao

ISBN: 978-93-90620-55-5/Year 2023
Size 18 cm × 24 cm/Pages 774
Paperback/₹ 995.00

New



(See on page 105)

Contents:

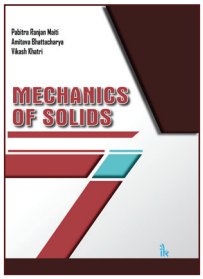
Introduction/Consistent Deformation and Slope Deflection Methods/ Flexibility Matrix Method: Structures Approach/Stiffness Matrix Method: Structures Approach/Flexibility Matrix Method: Element Approach/Stiffness Matrix Method: Element Approach/Computer Programming Preliminaries/Appendix

Audience: B.E & B.Tech students of Civil Engineering.

Shelving: Civil Engineering

Mechanics of Solids

New



Pabitra Ranjan Maiti
Amitava Bhattacharya
Vikash Khatri

ISBN: 978-93-90620-69-2/Year 2022
Size 18 cm × 24 cm/Pages 552
Paperback/₹ 525.00

Mechanics of Solids is a basic engineering course that deals with the behaviour of solid bodies subjected to various types of loading. The basic objectives of this course are the determination of the stresses, strains and deformations produced by the loads.

The main objective of this book is to present the aspects of mechanics of materials in unified and integrated manner. This book is structured to meet the requirements of the course contents of Mechanics of Solids or Strength of Materials for undergraduate students of civil, mechanical and aerospace engineering. It is also a valuable reference for practising engineers and architects. The book covers the syllabi of various universities and AICTE undergraduate curriculum of engineering and solid mechanics.

All the chapters are equipped with basic background of the problems and solved examples. Complex problems are illustrated for competitive and university examinations. A number of multiplechoice questions taken from GATE, IES and Civil Services are included in the appendix.

Divided in 12 chapters the book broadly deals with the following:

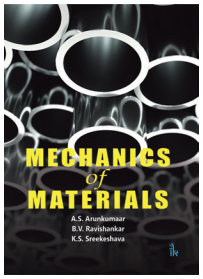
- fundamentals of mechanics
- stress and strain of materials body
- behaviour of material under axial loading
- normal stress, axial strain, simple tension test, shear stress and strain, and strain energy under impact load
- analysis of two-dimensional stresses, stresses at a point, Mohr's circle for plane stress and general stress system at a point
- stress-strain relation of three-dimensional body, plane stress and plane strain, relation between elastic constants and theories of elastic failure
- applications of stress and strain in practical problems
- analysis of thin and thick pressure vessels
- behaviour of solid and hollow prismatic shaft under torsion
- bending of simple beams, bending moment and shear force diagram
- Castigliano's method
- bending normal and shear stresses of beams for different cross sections, unsymmetrical bending of beam buckling of columns for simple columns for different end conditions.

Contents:

Introduction/Axial Loading, Simple Stresses and Strains/Analysis of Stress/Analysis of Strain/Relation between Stress and Strain/ Thinwalled Pressure Vessels/Axisymmetric Problems: Thick Cylinders and Rotating Disks/Torsion of Shafts/Bending Moments and Shear Forces/Slope and Deflection of Beams/Pure Bending and Bending Stresses/Buckling of Columns/Appendix-1: Centre of Gravity, Centre of Mass, Centroids and Moment of Inertia/Appendix-2A: Competitive Objective Questions /Appendix-2B: ESE-GATE Objective Questions 2018-2020/Index

Audience – Undergraduate students of Civil, Mechanical and Aerospace Engineering.

Mechanics of Materials



A.S. Arunkumaar
B.V. Ravishankar
K.S. Sreekeshava

ISBN: 978-93-86768-75-9/Year 2020
Size: 18 × 24 cm/Pages 424
Paperback/₹ 515.00

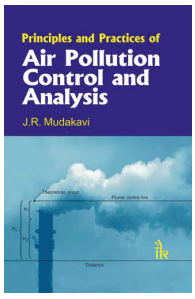
Safety of material is the top priority in the design of any product. Proper understanding of mechanics of the deformable bodies is required to provide safety to any material. This book deals with the basic principles of strength of materials with respect to deformable bodies. Strength of materials or elements of mechanics of materials is an important subject for civil, mechanical, industrial production, aeronautical and automobile engineering students who are required to acquire wide knowledge of basic mechanism involved in mechanics. It is a vast field and is largely taught at the undergraduate level. The topics are covered with relevant conceptual explanations with illustrative examples in nine modules. Several complicated topics like failure theories and compound stress are covered with explanation. Numerical examples have been solved covering all complexities. At the end of each chapter, a sufficient number of problems are provided as exercise.

Contents:

Simple Stress and Strains/Bending Moment and Shear Force in Beams/Stresses in Beam/Compound Stresses/Deflection of Beams/ Elastic Stability of Columns/Torsion/Thin and Thick Cylinders/ Theories of Elastic Failures/Important Relationships/Index

Audience – B.E & B.Tech. civil, mechanical, industrial production, aeronautical and automobile engineering students.

Principles and Practices of Air Pollution Control and Analysis

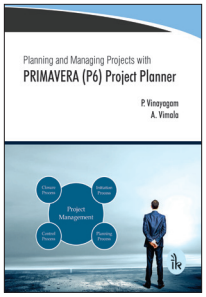


J.R. Mudakavi

ISBN: 978-93-81141-83-0/Year 2010
Size 16 cm × 24 cm/Pages 737
Paperback/₹ 525.00

(See on page 243)

Planning and Managing Projects with PRIMAVERA (P6) Project Planner



P. Vinayagam • A. Vimala

ISBN: 978-93-85909-15-3/Year 2016
Size 18 cm × 24 cm/Pages 182
Paperback/₹ 425.00

m As timely and effective delivery of projects has become increasingly critical, the need for effective project and resource management has become essential. Effective management can be achieved by using different planning management tools. One of the best and accepted software around the world is PRIMAVERA. This book attempts to explain the computer-aided construction management programme concepts and deals with various techniques of project management, from the planning stage to the commissioning stage using PRIMAVERA. The project management tool PRIMAVERA is used to plan, schedule, manage, recognize potential problems in the projects and offer solutions to overcome them.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

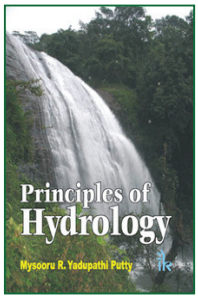
Salient Features:

- Basic concepts and techniques of project management, illustrated by simple examples.
- Chapters are organized with all important aspects of project management, right from the planning stage, intermediate stage of scheduling, controlling, implementing, and up to its final stage of commissioning.
- Step-by-step procedure to plan and manage a project by using PRIMAVERA with necessary background information.
- Recent advances in the communication network and in the application of computers in project management have also been focused.

Contents:

1. Project Planning and Management
2. Fundamentals of Project Management
3. Construction Management
4. PRIMAVERA-P6 Primary Elements

Principles of Hydrology



Mysooru R. Yadupathi Putty

ISBN: 978-93-80578-53-8/Year 2010
Size 16 cm × 24 cm/Pages 440
Paperback/₹ 425.00

This treatise on Hydrology is an attempt to bridge the gap that exists between principles and practice in the subject. It lays importance on principles and concepts and simultaneously furnishes guidelines on practical use of the subject, through a large number of worked problems. The problems worked out are based mostly on field data. The book covers courses on Hydrology at both the U.G. and P.G. levels. It also provides reliable reference material to students preparing for competitive examinations such as GATE and IES. It further forms a ready reference guide to the practising engineers. The and most distinguishing feature of the book is the way practically important topics on Frequency analysis, Regression analysis and watershed modelling are dealt with. The book is expected to be of great help to the students at the U.G. level and as well to provide impetus to teachers to take up B.E. projects in this subject.

Contents:

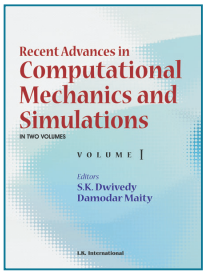
Introduction/Precipitation/Analysis of Rainfall Records/Infiltration/Evaporation and Evapotranspiration/Streamflow Measurement/Runoff and Basin Yield/The Hydrograph/Flood Estimation/Flood Routing/Index

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Audience – Undergraduate and postgraduate students enviroment science.

Recent Advances in Computational Mechanics and Simulations

Two Volume Set



Editors

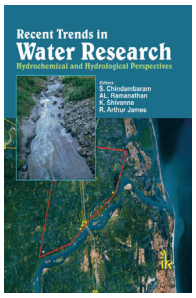
S.K. Dwivedy • Damodar Maity

ISBN: 978-81-89866-16-7 (Set)/Year 2007
Size 18.5 cm × 25 cm/Pages 2174
Paperback/₹ 4995.00

(See on page 109)

Recent Trends in Water Research

Hydrochemical and Hydrological Perspectives



Editors

S. Chidambaram • AL. Ramanathan
K. Shivanna • R. Arthur James

ISBN: 978-93-80026-91-6/Year 2010
Size 18 cm × 24 cm / Pages 247
Hardback/₹ 1195.00

The developments in science pave way to the betterment of the mankind. A field of research develops only when it copes up with the recent developments. This book aims to bring together and document the recent developments in the field of water research. This book is an agglomeration of different aspects of water research and recent developments covering surface water, rain water and ground water. Several multi disciplinary papers covering geophysical applications, hydrogeochemical aspects, isotopic signature, speciation of trace elements, etc., were incorporated to give an insight into the various aspects of water resources. The applications of resistivity survey in identification of sea water intrusion, the chemical nature of water in different environments, their equilibrium conditions, quality, spatial and temporal variations in their quality and quantity are also discussed in detail. This edition is done with a clear and simple style with main emphasis on present problems from developing world environments highlighting the relevant data with examples representing current status of various water resources. All these features make this book indispensable to the researchers and managers of water resources in most part of the world.

Contents:

Geophysical Investigation in the Different Litho Units of Gadilam River Basin, Tamil Nadu, India/Delineation and Correlation of Fresh and Salt Water Interface of Shallow Coastal Pheratic Aquifer by Surface and Subsurface Geoelectrical Investigations/Hydrogeological Studies of Coastal Zone from Triplicane to Tiruvanmiur, Chennai, Tamil Nadu/Hydraulic Continuity between Groundwater Sources in the Malabar Region of Kerala— Evidence from Stable Isotopes and Ion Chemistry/Fracture Detection in Hard Rock Terrains of Villupuram District Using Apparent Resistivity Data—Case Studies/Identification of Groundwater Flow Direction Using Tritium Analysis of Lower Gundar Basin, Southern Tamil Nadu, India/Groundwater Quality Profiling by Borehole Geophysics — Case Studies in Cuddalore District, Tamil Nadu/A Study on Trace Metal Pollution in the Gadilam River Basin, Tamil Nadu, India/Groundwater Quality Assessment of Andimadam Block, Perambalur District, Tamil Nadu/Physico-Chemical Analysis of Groundwater Around Sathya Dye Industry, Tiruppur/ Hydrochemical Assessment of Groundwater in Thirumanimuttar Sub basin – Implication of Water Quality Degradation by Anthropogenic Activities/Hydro Geochemical Study of Groundwater for Rural Development—A Case Study from Ponnaramapatty Area of Valapadi Block, Salem District, Tamil Nadu/Current Status of Nitrate Ion Contamination in Sopore Town, Kashmir/Hydrogeochemical Studies in and Around Kalpakkam Kanchipuram District Tamil Nadu/ Physical and Chemical Analysis of Drinking Water Samples in Nagamalai Pudukkottai, Madurai/Defluoridation of Groundwater by Aquatic Macrophyte *Hydrilla Verticillata*/ Speciation Analysis of Trace Elements in Water by Atomic Absorption Spectrometry/Procurement of Pentachlorophenol Degrading Bacteria from Tannery Effluent for their Waste Water Treatment/Variable Characteristics of Rainwater Status in the Union Territory of Puduchery–A Focus on Puduchery and Karaial Regions/Hydrochemistry and Environmental Status of Pazhayar River, Kanyakumari District, Southern Tamil Nadu/Groundwater Quality Assessment of Kammapuram Block, Cuddalore District, Tamil Nadu/Hydrogeochemical Study of Groundwater in Gummudipoondi Taluk,

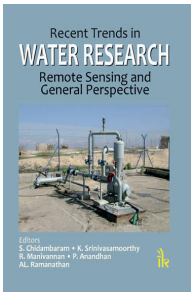
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Thiruvalluvar District, Tamil Nadu/Trend Analysis of Groundwater Levels in Stressed Aquifers of Tiruvannamalai District, Tamil Nadu/ Index/ Author Index.

Audience – Teachers, Researchers in Water Management, Enviromental science.

Recent Trends in Water Research

Remote Sensing and General Perspectives



Editors

S. Chidambaram
K. Srinivasamoorthy
R. Manivannan
P. Anandhan
AL. Ramanathan

ISBN: 978-93-80578-17-0/Year 2010
Size 18 cm × 24 cm/Pages 222
Hardback/₹ 1195.00

The application of geographic information system (GIS) in groundwater had gained momentum to an extent that its application is multi diverse. It a powerful set of tool for collection storing, retrieving, transforming and displaying spatial data for a purpose that benefits human community. This book is an attempt to integrate various aspects of application of GIS in the field of water research. The compilation of papers in this present book will help the readers to obtain an insight regarding the solution for hydrogeochemical problems using GIS as a tool for both rain and groundwater. GIS tool for soil suitability, planning and management of resource, distribution and analysis of various geochemical parameters has also brought to limelight. Applications of landuse/landcover , morphometric analysis, buffer analysis and relation with geophysical technique has been brought out in an elegant manner, with a clear and simple style. These features make this book interesting and indispensable to the researchers and managers of the water resources in different parts of the world.

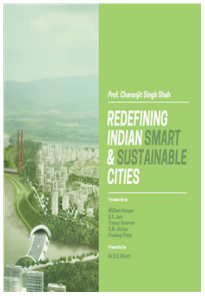
Contents:

- Land use/land cover mapping in Sarabanga River basin, Salem District, Tamil Nadu. Using Multi - Temporal Remote Sensing Data and Geographical Information System.
- Targeting Ground Water Potential Zones in Hard Rock Terrain Using Remote Sensing and Gis.
- Identification of Ground Water Potential Zone Around Tiruchirappalli District Using Remote Sensing and GIS.
- Morphometric Analysis of Nandiyar Basin Using Remote Sensing& GIS For Sustainable Water Resource Management.
- Water Planning and Identification of Further Favourable Areas in Over Exploratory Talaivasal Block, Salem District Using Remote Sensing and GIS Techniques.
- Rainfall Distribution Study in Coimbatore District Using Geographic Information System (GIS).
- Identification of Regions with Groundwater Suitable for Irrigation Purpose, Using GIS – A Case Study.
- Application of Vertical Electrical Sounding to Demarcate Groundwater Potential Zones and Contamination Studies in Thirumanimuttar, Sub-basin, Tamilnadu, India using GIS Techniques.
- Studies on Changes in the Environmental Conditions on Water Bodies of Cuddalore Coastal Area in Relation to Tidal Inundation.
- Drainage and its Parameters Identification and Characterization in the Vaippar River Basin, Tamil Nadu.
- Identification of Flood Breaching Zones Using GIS For Chidambaram Taluk, Cuddalore District, Tamil Nadu.
- Study on Water Quality of Shafaroud River, IRAN.
- A Statistical Approach to Study the Spatial and Temporal Variation of Electrical Conductivity of Groundwater using GIS in Dindigul District ,Tamil Nadu.
- Application of Geo-Spatial Technology in Groundwater Quality Discrimination Studies in and Around Chennai City, Tamil Nadu, East Coast of India.

Audience – Teachers, Researchers in Water Management and Enviromental science.

Redefining Indian Smart & Sustainable Cities

Charanjit S. Shah



ISBN: 978-93-85909-62-7/Year 2017
Size 25 cm × 25 cm/Pages 406
Hardback/₹ 5,995.00

Redefining Smart & Sustainable Cities, although has been conceived much earlier and has been continually refined over and over, the recent announcement of 100 Smart Cities by the Hon'ble Prime Minister of India, Mr Narendra Modi, and the spate of events thereafter, has made the release of the book rather accelerated. It unfolds for its readers the thus-far little-known story about smart cities that have existed since centuries and what the existing cities can learn from them. The author has taken interesting habitat traits and important data points right from prehistoric times to the modern day. Parallels have been drawn from various parts of the globe cutting across time – right from the Stone Age to the modern Digital Age. The authors have critically analyzed and shown that since the problems had the same set of root causes the solutions can also lie among some of the thriving and sustainable modern-day smart cities of the world. In fact, through careful extrapolation of habitat aspects the author has shown that many of the sustainable smart cities today have undergone similar deterioration for at least some time before these cities were restored and made truly smart.

Each chapter weaves into it text and explanations written in a direct and simple manner and is interspersed with interesting pictures, drawings, infographics, and facts and figures directly relevant to the topic under discussion. This makes the book a very engaging and interesting read.

Among many highlights of the book, the following are worth specific mention because of their relative importance to the book's subject:

- Analyzes four potential Indian smart cities including the capital city of Delhi in a bare bone manner for problems and their cures (other three are Jaipur, Chandigarh and Jamshedpur).
- Critically reviews three ongoing smart cities – GIFT City, Dholera and Masdar – and provides cues to planners and architects with key takeaways.
- Discusses all essential habitat factors, including walkability, facilities and services planning, connectivity, proximity to a permanent water source.
- Extensively refers to three European cities – London, Paris and Barcelona -- for their success story, in search of critical takeaways
- Gives a generic blueprint for making tomorrow's cities smart and sustainable in a unique framework comprising "vision", "urbanism", "layers" and "process"

Contents:

Evolution of Human Settlement/Global Green Walkable Cities/ Transformation of National Capital/Transformation of Indian Cities/ Futuristic Smart Cities/Intermodality and Last Mile Connectivity/ New Smart Cities/The Cities of Tomorrow/Appendix/ References.

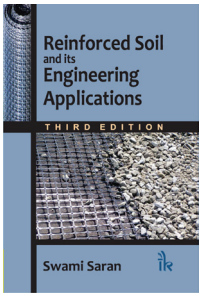
Audience – Government offices relating to urban planning, Planners and Urban Designers, Engineering Colleges, Schools of Architecture and Planning, Project Management Consultants, Architecture and Planning Consultancy firms, All manufacturers and Vendors related to smart cities, Green Consultants, Green organisations, GREHA, LEED, NGOs, Environmentalists, Geologists, Scientists , Bureaucrats and Sociologists.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Reinforced Soil and its Engineering Applications

Third Edition



Swami Saran

ISBN: 978-93-85909-72-6/Year 2017
Size 16 cm × 24 cm/Pages 440
Paperback/₹ 595.00

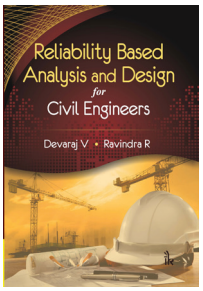
Reinforced soil is a composite material formed by the association of frictional soil and tension-resistant elements in the form of sheets, strips, nets or mats of metal, synthetic fabrics, or fibre reinforced plastics and arranged in the soil mass in such a way as to reduce or suppress the tensile strain that might develop under gravity and boundary forces. The variety and range of applications of reinforced soil technique are unlimited. Jones (1985) identified several field applications, viz., retaining walls, abutments, quay walls, embankments, dams, hill roads, housing, foundations, railways, industry, pipe works, waterway structures and underground structures. In several countries structures have been constructed using this technique and the concept has become very popular. The book covers all the important topics like Basic Mechanism, Strength Characteristics, Frictional Characteristics, Reinforced Soil, Wall, Wall with Reinforced Backfill, Foundation on Reinforced Soil, Soil Nailing and Randomly Distributed soil. Each chapter is supported by illustrative examples for easy understanding. In this edition, chapters on Reinforced Soil Wall, Foundation on Reinforced Soil, and Randomly distributed reinforced soil have been substantially modified making the book more useful. The book would well serve and benefit undergraduate and postgraduate students, researchers and professional geotechnical engineers.

Contents:

Introduction/Basic Components of Reinforced Soil/Strength Characteristics of Reinforced Soil/Soil-Reinforcement Interface Friction/Reinforced Earth Wall/Wall with Reinforced Backfill/ Foundations on Reinforced Soil Beds/Soil Nailing/Fibre Reinforced Soil/Index.

Audience – Undergraduate and Postgraduate Students/Researchers/ Professional and Geotechnical Engineers.

Reliability Based Analysis and Design for Civil Engineers



V. Devraj • Ravindra R

ISBN: 978-93-85909-80-1/Year 2017
Size 18 cm × 24 cm/Pages 352
Hardback/₹ 1,095.00

The primary objective is to structure a book to be used as a text for undergraduate, postgraduate students in Civil Engineering, and practising civil engineers, who have little or no background in probability theory or statistics, with concepts and basic methods for evaluating reliability index or indices. The book includes a comprehensive range of worked examples to consolidate the understanding of fundamental principles. The experimental or field data is collected and stored as a data base and reliability index is assessed through a process which is iterative. The contains chapters on:

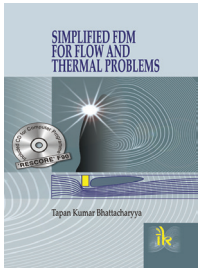
Contents:

Data Analysis/Probability Concepts/Statistics/Reliability Analysis by Hasofer Lind method, Point Estimate method, Taylor Series/ System Reliability/System Reliability/Monte Carlo Simulation/Index

Audience – B.E. and B.Tech.

Simplified FDM for Flow and Thermal Problems

Includes Diskette for Computer Program



'RESCORE' F90
Tapan Kumar Bhattacharyya

ISBN: 978-81-88237-12-8/Year 2009
Size 14 cm × 21.5 cm/Pages 206
Hardback/₹ 795.00

This book is on finite difference method (FDM) for flow and thermal problems. The text describes a simplified finite difference method arrived at after a few decades of practically single-handed experience of solving flow and thermal problems using finite difference method. The method presented in this text brings back the original simplicity of the finite difference method without sacrificing accuracy. It is meant for those students and researchers who wish to solve such problems as developing their own program with little effort. The advantage in doing this is that it is exactly known what the program is doing in all micro details.

Contents:

Fundamentals: Introduction/General Methods of Finite Differencing/ Special Methods of Finite Differencing/Errors in Finite Difference Formulation/Methods of Solving Finite Difference Equations/Finite Differencing of Convection-Diffusion Equation/Finite Differencing of Transient-Diffusion Equation/Finite Differencing of Steady-Diffusion Equation/Finite Differencing of Unsteady Convection-Diffusion Equation

Applications: Stream function—Vorticity Approach for Solving Flow Problem by Finite Difference Method/Primitive Variable Approach for Solving Flow Problem by Finite Difference Method/Natural Convection in Channel Without or With Internal Body/A Simple Treatment of Irregular Geometry/Brief Description of the Computer Program

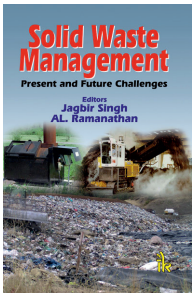
Computer Program: Appendix 1/Appendix 2/Bibliography.

Audience – Industrial and Civil Engineering students

Solid Waste Management

Present and Future Challenges

Editors



Jagbir Singh • AL. Ramanathan

ISBN: 978-93-80026-42-8/Year 2009
Size 16 cm × 24 cm/Pages 272
Paperback/₹ 375.00

There is no subject in the world more vital to the future and sustainability of the planet earth for future generations than that of Waste Management and all that encompasses. Animals produce organic waste only. Human beings, in their ignorance and lack of foresight, have now created so much inorganic waste that the whole planet is suffering from pollution in the air, in the rivers and oceans of the world as well as on the land masses.

This book deals intensively with every aspect of organic and inorganic waste management and explains how each type of waste must be correctly dealt with if mankind is to decrease the outbreak of disease, thereby ensuring that all inhabitants of the planet earth have a healthy future. The book also emphasizes the responsibility and steps that each individual must take in every country of the world if we are to return mother earth to her former glory in the 21st century.

Contents:

Solid Waste Management in the Sensitive Hill Spots of the North-western Himalayas: A Case of Kullu-Manali Tourist Complex (KMTC), India/Methane Emission Estimations from Landfill Sites/Disposal of Industrial Sludge at Wazirpur, Delhi: Effect of the pH Balance and Cation Exchange Capacity on Available Calcium and Magnesium/

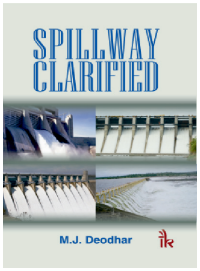
Safe Fly Ash Disposal-Challenges and Problems: Case of IB Thermal Power Plant, Orissa/Present and Future Challenges in the Recycling and Management of Solid Waste/Municipal Solid Waste Management: A Case Study of Patiala City, Punjab/Conversion of Municipal Solid Waste into Organic Manure/Recycling of Solid Waste Materials/ Different Methods in Solid Waste Management/Sustainability of Urban Solid Waste/Solid Waste Management in India/Electronic Waste Management in India/Solid Waste Management at Community Level: Barriers and Solutions/Waste to Wealth-Prospects for Utilization of Municipal Solid Waste (MSW) in India/State-of-Art and Future Threats- Nitrate Pollution Management/Solid Waste Management in the Municipal Corporation of Delhi/The Disposal of Urban Industrial Sludge on the Land at Wazirpur, Delhi: Effect of the pH Balance on Available Sulfur/Clean Development Mechanism: An Opportunity in Solid Waste Perspective/Problems of Municipal Solid Waste Management in Urban Areas/Muncipal Solid Waste (MSW) Management in Selected Metropolitan Cities in India/Biomedical and Health Care Waste Management in India/Approaches to Solid Waste Management: A Case Study of Delhi/Solid Waste Management and Identification of Landfill Sites (A case study of Durgapur town, West Bengal)/State of Landfill Sites in the National Capital Territory and their Impact on Groundwater Pollution, India/ Initiatives Through Community Participation of Solid Waste Management-An NGO Experience/Lab Waste Management, Chemistry Education and Green Experiments/Role of GIS in Solid Waste Management/Index.

Audience – Environmental studies and Environmental science.

Spillway Clarified

M.J. Deodhar

ISBN: 978-93-82332-29-9/Year 2013
Size 18 cm × 24 cm/Pages 216
Paperback/₹ 355.00



Spillways are structures which provide controlled release of excess water from dams and reservoirs. This release is of utmost importance otherwise the excess water can damage the dams and cause devastation.

This book will be useful for the final year degree & diploma courses, and practicing engineers.

The book broadly discusses various types of spillways, their designs, control structures, energy dissipation arrangements and their safety aspects.

Written in question-answer format to help students grab the subject quickly and to the point, it contains 30 numerical examples alongwith 110 diagrams to understand the theory part. Due to its format it will be highly useful to students in viva voce and competitive examinations.

Contents:

1. Introduction
2. Control Structure
3. Energy Dissipation Arrangement
4. Field Practices

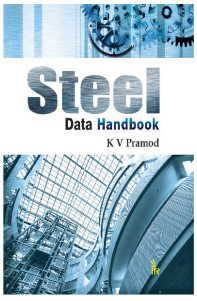
Appendices/ Bibliography/ Index

Audience – Diploma and Degree Students.

Steel Data Handbook

K.V. Parmod

ISBN: 978-93-84588-34-2/Year 2015
Size 22 cm × 24 cm/Pages 240
Paperback/₹ 325.00



The book is specially planned for reducing the time required for design of steel structural members. It gives the properties of standard steel sections used in regular designs and also gives (i) tensile load capacity of equal and unequal angle sections; (ii) compressive strength and load capacity of single angle sections (both equal and unequal angles), all I-sections, channel sections, T-sections and (iii) Moment of resistance of all I-sections. The details of load capacities and moments of resistance are provided in the form of tables which are very easy to use. The tensile load capacities of angle sections are given for both yield stress and ultimate stress, for full cross-sectional area and can be used for the design of welded members. The compressive load capacities are given for a range of effective lengths starting from 1.0 m to an effective length corresponding to a slenderness ratio of 250, maximum value as per the code IS:800-2007. The Moments of Resistance for all I-sections are given for both cases, viz., low shear and high shear, considering the compression flange to be laterally supported. The book also helps in making the designs economic as all sections having the design load/moment capacities can be listed and the one with minimum weight can be selected as the design member. The book aims at increasing the efficiency of the steel structural designer-saving time and simultaneously achieving economy. The students also can pick up this art while learning the subject.

Contents:

Symbols/Rolled Steel Beams/Rolled Steel Channels/Rolled Steel Equal Angles/Rolled Steel Unequal Angles/Rolled Steel Tee Bars Dimensions, Properties and Section Classification/Single Joist with Additional Plates on Both Flanges to be used as Girders/Single Joist with Channel and Plates on The Flanges to be used as Girders

Tensile Load Capacity of Single Equal Angle Sections

Tensile Load Capacity of Equal Angle Sections for Yield Stress and Ultimate Stress with Welded end Connections

Tensile Load Capacity of Single Unequal Angle Sections

Tensile Load Capacity of Unequal Angle Sections for Yield Stress and Ultimate Stress with Welded end Connections

Factored Axial Compression Load Capacity of Single Equal Angle Section

Axial Compression Load Capacity of Single Equal Angle Section

Factored Axial Compression Load Capacity of Single Unequal Angle Section

Axial Compression Load Capacity of Single Unequal Angle Section

Factored Axial Compression Load Capacity of Single I-Sections

Axial Compression Load Capacity of I-Section

Factored Axial Compression Load Capacity of Single Channel-Sections

Axial Compression Load Capacity of Channel-Section

Factored Axial Compression Load Capacity of Single Tee-Sections

Axial Compression Load Capacity of T-Section

Factored Moment of Resistance of I-Sections

Moments of Resistance of Indian Standard I-Sections for Low Shear and High Shear

Audience – Civil Mechanical Engineering Students.

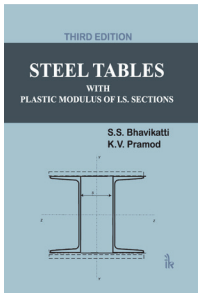
Steel Tables

With Plastic Modulus of I.S. Sections

Third Edition

S.S. Bhavikatti • K.V. Parmod

ISBN: 978-93-85909-74-0/Year 2017
Size 18 cm × 24 cm/Pages 96
Paperback/₹ 165.00



Though determining plastic modulus of section assuming the section to consist

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of rectangular parts are within the reach of a design engineer, but as Indian Rolled Steel Sections consist of sloping flanges, fillets at junctions and rounded edges are slightly complex. The authors have considered all the complexities in the shapes of Rolled Steel Sections and have determined Plastic Modulus of Steel Sections for I-beams, Channels, Tee-sections, Equal and Unequal Angle sections, I-beams with cover plates on both flanges and I-beams with Channel section on the upper compression flange (for Gantry Girders) and Double channel laced or battened columns. Besides this buckling class of the sections in bending and axial compression are also provided.

Useful information about properties of Indian Standard straps, strips and sheets are tabulated for ready reference for design engineers.

The book also provides ready references of shear strength and tensile strength of Grade M4.6 bolts of different sizes and minimum end distances and pitches in their connections. Fillet weld strength per mm length are also given.

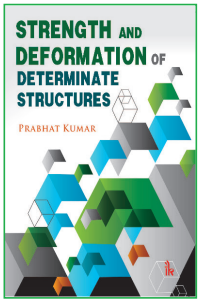
At the end important formulae to be used in Working Stress Method and Limit State Method are provided.

Contents:

Rolled Steel Beams/Rolled Steel Channels/Rolled Steel Equal Angles/Rolled Steel Unequal Angles/Rolled Steel Tee-Sections/Rolled Steel Beam with additional plates on both flanges to be used as girders/Rolled Steel Beam with additional Channel on one side to be used as Gantry Girders/Mild Steel Flats/Mild Steel Strips/Mild Steel Sheets/Areas and perimeters of Round Bars/Shear Strength of Bolts of Grade 4.6/Tensile Strength of Bolts of Grade 4.6/Minimum End and Pitch /Distances for Bolted Connections/Fillet Weld Strength per mm/Some important formulae for Working Stress Method of design/Some important formulae for Limit State Method of design./

Audience – BE and B.Tech students.

Strength and Deformation of Determinate Structures



Prabhat Kumar

ISBN: 978-93-84588-32-8/Year 2016
Size 18 cm × 24 cm/Pages 400
Paperback/₹ 625.00

This is a comprehensive textbook, covering all the important topics under determinate structures. This book departs from the conventional practice of giving all theories in one place followed by a plethora of solved problems, and instead presents each theory followed by solved problems pertaining to that theory. This helps the students to understand each theory and its applications in a better manner. When a problem can be solved by several methods, the same problem is solved by different methods to highlight salient features of the method used.

This book is divided into 14 chapters with appendices which contains useful information of this subject.

Salient Features:

- It is written in a simple language.
- Entire subject is divided into chapters, sections and sub sections.
- Each topic is described in reasonable detail and no aspect is bypassed.
- Every theory is followed for solved illustrative problems.
- Each concept is illustrated with handful of illustrations known as free body diagrams.
- Each chapter of this book ends with a section termed as "high alert" which is a summary of the chapter highlights.
- There are a variety of problems for practice at the end of every chapter.

With its coverage and approach, the book will be immensely useful to the students and faculties of civil engineering. The detailed derivations and descriptions of underlying concepts make life of a teacher very much easy. Technical contents of the book are also useful for students of Architecture.

Contents:

Basic Fundamentals of Structural Analysis/Equilibrium Analysis/Development and Analysis of Trusses/Shear Force and Bending Moments in Determinate Beams/Shear Force and Bending Moments in Determinate Frames/Analysis of Three–Hinge Arches/Calculation of Deflection by geometric methods/Strain Energy Methods/Rolling Loads and Influence Lines diagrams/Engineering Computations with Influence Line Diagrams/Un–symmetrical Bending of slender and straight beams/Shear Centre/Bending of Curved Bars/Analysis of space trusses/Bibliography/Appendix/Index

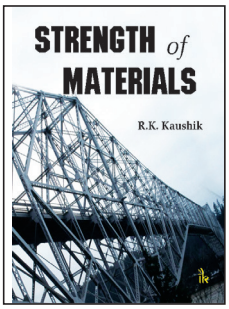
Audience – B.Tech students of Civil Engineering, M.Tech students specializing in structural analysis and design, B. Arch students.

Strength of Materials

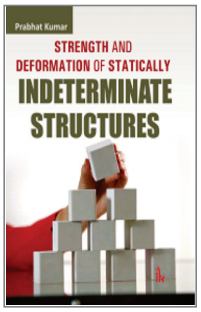
R.K. Kaushik

ISBN: 978-93-84588-43-4/Year 2016
Size 18cm × 24cm/Pages 704
Paperback/₹ 595.00

(See on page 110)



Strength and Deformation of Statically Indeterminate Structures



Prabhat Kumar

ISBN: 978-93-84588-72-4/Year 2016

Size 18 cm × 24 cm/Pages 496
Paperback/₹ 545.00

This is a comprehensive textbook, covering all the important topics under indeterminate structures. This book departs from the conventional practice of giving all theories in one place followed by a plethora of solved problems, and instead presents each theory followed by solved problems pertaining to that theory. This helps the students to understand each theory and its applications in a better manner. Wherever a problem can be solved by several methods, it has been solved by different alternative methods to highlight the salient features of each of the methods used.

Salient Features:

- Entire subject is divided into chapters, sections and subsections.
- Each topic is described in reasonable detail, and no aspect is bypassed.
- Every theory is followed by solved illustrative problems.
- Each concept is illustrated with illustrations known as free body diagrams.
- Each chapter of this book ends with a section termed as "High Alert" which is a summary of the chapter.
- There are a variety of problems for practice at the end of every chapter.

With its coverage and approach, the book will be immensely useful to the students and faculties of civil engineering. The detailed derivations and descriptions of underlying concepts make life of a teacher easy. Technical contents of the book are also useful for students of Architecture.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

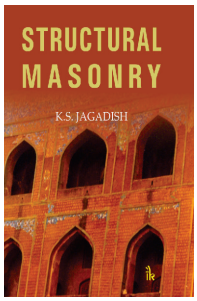
Contents:

Basic Fundamentals/Shear Force and Bending Moment in Beams and Frames/Analysis of Beams with Fixed Ends/Analysis of Continuous Beams/Strain Energy Methods/Analysis of Two–Hinge Arches/Cables and Suspension Bridge/Influence Line Diagrams for Indeterminate Beams/Plastic Analysis of Structures/Consistent Deformation Method (Force Method)/Slope–Deflection Method/ Moment Distribution Method/Displacement (Stiffness) Method of Structural Analysis/Displacement (Stiffness) Matrix Method for Pin–Jointed Frames/Displacement (Stiffness) Matrix Method for Beams/Analysis of Plane Frames by Stiffness Method/Appendices/ Bibliography/Index

Audience – UG and PG Student of Civil Engineering and Architecture; Young Practicing Engineers and structural designers.

Structural Masonry

K.S. Jagadish



ISBN: 978-93-84588-66-3/Year 2015
Size 14 cm × 21.5 cm/Pages 212
Paperback/₹ 385.00

Structural masonry in India, especially when bricks are used as masonry units, is substantially different from brick masonry in the west. This is due to the rather low strength of bricks here. The properties of bricks vary widely from region to region and the elastic modulus of the mortar is often more than that of the brick. This book attempts to address this situation by studying the load carrying capacity of such brick masonry. The newly emerging masonry units like concrete blocks, hollow clay blocks and stabilized mud blocks are also examined for use in masonry walls. The design of walls subjected to axial or eccentric compression is also discussed with sample calculations for load bearing masonry buildings going up to 8 floors. The strength of masonry in shear and flexure is also studied. Reinforced masonry is also discussed in view of its potential in designing earthquake-resistant masonry. This book is an attempt to provide up-to-date information to engineers and builders in the area of masonry.

Contents:

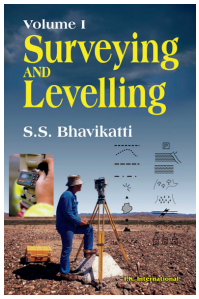
Introduction to masonry/Materials for masonry/Masonry in compression/Masonry walls in axial and eccentric compression/ Masonry bond strength and masonry in flexure and shear/Design of masonry walls/Failure theories of masonry/Masonry behaviour due to earthquake ground motions/Index

Audience – Civil engineers, architects, practitioners of mud construction.

Surveying and Levelling

Volume I

S.S. Bhavikatti



ISBN: 978-81-906942-0-9/Year 2008
Size 16 cm × 24 cm/Pages 404
Paperback/₹ 425.00

This book is meant for the first course on Surveying and Levelling. It covers all basic methods of surveying and levelling, applications of surveying and levelling, calculation of areas and volumes of earth work involved in the field work. Minor instruments used in the field are also explained.

The author has taken care to use simple and lucid language and to explain the subject with neat sketches. A number of problems are solved to make the subject clear.

Diploma and degree students of Civil Engineering, Architecture and Mining will find this book useful.

Contents:

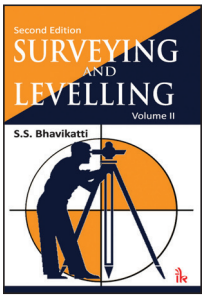
Introduction/Errors in Surveying/Measurement of Horizontal Distances Using Chain and Tape/Chain Surveying/Angle and Direction Measurements with Compass/Compass Surveying/ Plane Table Surveying/Levelling/Contouring/Theodolite Surveying / Trigonometric Levelling/Permanent Adjustment of Dumpy Level and Theodolite/Computation of Areas/Computation of Volumes /Minor Instruments/Index.

Audience – Diploma and degree students of Civil Engineering, Architecture and Mining.

Surveying and Levelling

Volume II, Second Edition

S.S. Bhavikatti



ISBN: 978-93-85909-09-2/Year 2016
Size 16 cm × 24 cm/Pages 456
Paperback/₹ 445.00

This book is meant for the second course on Surveying and Levelling. It covers all the advanced methods of surveying including remote sensing and GIS.

New in this edition

A new chapter "Photogrammetry" has been added in the present edition to make the book up to date and more beneficial for the students.

Diploma and degree students of civil engineering, architecture and mining will find this book useful.

Salient Feature:

- Covers theory with simple and precise explanations.
- Text illustrated with generous use of diagrams, latest photographs and tables.
- Provides a number of solved problems for clear understanding of the subject.

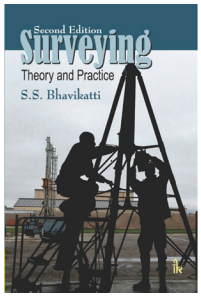
Contents:

Tacheometry/Circular Curves/Transition Curves/Vertical Curves/ Precise Levelling/Precise Theodolites/Electromagnetic Distance Measurement/Total Station/Construction Surveying/Hydrographic Surveying/Topographic Surveying/Route Survey/Mine Surveying/ Triangulation/Theory of Errors and Adjustment of Measurement/ Remote Sensing/Geographic Information System/Index

Audience – Diploma and degree students of Civil Engineering, Architecture and Mining.

Surveying
Theory and Practice 2/e

S.S. Bhavikatti



ISBN: 978-93-85909-08-5/Year 2017
Size 16 cm × 24 cm/Pages 896
Paperback/₹ 625.00

The book deals entire surveying theory and practice to be studied by civil engineering students. It covers all basic methods of surveying like chain surveying, compass surveying, plane table surveying , theodolite surveying and explain use of levels, contouring etc. It also covers modern methods of leveling like stations, photogram metric surveying and remote sensing, astronomical survey is also covered .Application of surveying to engineering projects, calculation of areas and volumes of earthwork involved in the field work are explained and illustrated with problems.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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New in this edition:

Apart from making some corrections and revisions at some places one new chapter "Photogrammetry" has been added to this edition.

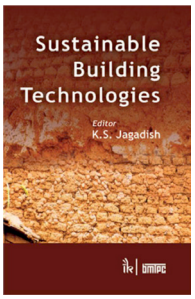
Diploma and degree students of civil engineering, architecture and mining will find this book useful.

Contents:

Errors in Surveying/Measurement of Horizontal Distances using chain and tape/Chain Surveying/Angle and Direction Measurements with Compass/Compass Surveying/Plane Table Surveying/ Levelling/Contouring/Theodolite Surveying/Trigonometric Levelling/ Permanent Adjustment of Dumpy level and theodolite/Computation of areas/Computation of Volumes/Minor Instrurments/ Tacheometry/Circular Curves/Transition Curves/Vertical Curves/Precise Levelling/Precise Theodolites/Electromagnetic Distance Measurement/Total Station/Constructions Surveying/ Hydrographic Surveying/Topographic Surveying/Route Survey/ Mine Surveying/Triangulation/Theory of Errors and Adjustment of Measurements/Remote Sensing/Geographic Information System/ Astronomical Survey/Photogrammetry

Audience –

Sustainable Building Technology



K.S. Jagadish

ISBN: 978-93-86768-20-9/Year 2019
Size 16 cm x 24 cm/Pages 376
Paperback/₹ 995.00

Sustainability of construction practices has acquired an all pervading importance in view of the run on material resources in recent years. Since construction industry guzzles huge quantities of materials, auditing their consumption is of urgent importance. Energy is another scarce resource. Conservation of energy and materials to meet the needs of future generations is the cornerstone of the approach to sustainability.

This monograph is an attempt to provide information on sustainable materials use and energy conservation for students of engineering and architecture. It is hoped that it will help professionals to think in the direction of new alternatives. Reduction in the use of fossil fuel based materials, use of renewable materials like bamboo and timber and recycling of construction and demolition wastes are some of the possibilities.

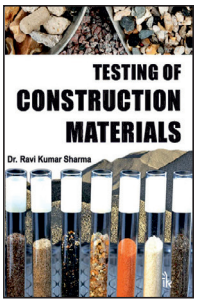
There is also an emphasis on the concept of green buildings. A special chapter is contributed to new building technologies for affordable housing for sustainable development.

Contents:

Economic Development, Energy Use and Carbon Emissions/ Energy and Buildings/Alternatives to River Sand in Mortars/More Alternatives to River Sand in Mortars/Sustainability and Resources for Buildings/Green Buildings/New Building Technologies for Affordable Housing/The Burnt Brick/Stabilized Mud Block/ Alternatives in Adobe/Alternatives in Adobe/Concrete Blocks/ Alternative Cements and Mortars/Stone in Construction/Design of Walls: Some Relevant Issues/Alternative Roofing Systems/Roofing Systems: Examples/Roofs Based on Curved Surfaces/Bamboo in Housing and Building Construction/Building with Bamboo: Story of Orlaha and Puraini in Bihar/Innovations in Bamboo and Concrete Based Construction for Sustainable and Durable Housing/Bamboo in Construction: An Overview/Timber and Buildings/Construction and Demolition (C&D) Waste/Appendices/Index

Audience – Civil engineers, architects, practitioners in building construction industry.

Testing of Construction Materials



Ravi Kumar Sharma

ISBN: 978-93-86768-28-5/Year 2019
Size 18×24 cm/Pages 224
Paperback/₹ 349.00

Testing of Construction Materials provides thorough understanding of the testing techniques in the subject. A brief theory is included with each experiment to familiarize the students with the basic principles and objectives. Photographs and figures of the experimental setup have been studied. The procedure, methods and relevant tables are based upon Indian standard specifications. Sample data along with the interpretation, calculations, relevant graphs and results are included for the students to understand various steps involved in testing techniques. A sufficient number of viva-voce questions are given at the end of each experiment.

Salient Features:

- Thorough understanding of the experimental techniques from learning and professional practice point of view.
- Methods and techniques of data presentation and interpretation.
- Important data, graphs and tables included for easy applications in the calculations of the results.
- Viva-voce questions for competitive examinations.
- Illustrations containing the photographs/figures and data sets.

Contents:

Determination of specific gravity of a stone sample./Determination of water absorption and porosity of given stone sample./Determination of weathering qualities of natural stone./Determination of durability of natural building stones./Determination of compressive strength of a stone sample./Determination of water absorption of burnt clay bricks./Assessment of the liability of burnt clay bricks to efflorescence./Determination of compressive strength of burnt clay bricks./Determination of moisture content and specific gravity of timber specimen./Determination of compressive strength of timber. Determination of tensile strength of timber./Determination of brittleness of timber./Performing tensile strength test on (i) mild steel flat (ii) mild steel bar and (iii) mild steel wire and to determine the field strength, ultimate tensile strength, percentage elongation, percentage reduction in area, modulus of elasticity, modulus of resilience and modulus of toughness./Determination of hardness number of steel and other metals./Determination of impact strength of steel./Checking the ductility of reinforcement bar by cold bend test./ Determination of fineness of cement./Determination of (i) standard consistency (ii) initial and final setting time of cement sample using Vicat's apparatus./Determination of soundness of given samples of cement and lime./Determination of compressive strength of cement sample./Determination of material finer than 75 micron present in aggregates by washing./Determination of silt, clay and fine dust in aggregates by sedimentation method./Estimation of the organic impurities in fine aggregates./Determination of specific gravity and water absorption of coarse aggregate./Determination of specific gravity and water absorption of fine aggregate./Determination of bulk density and percentage voids of aggregate./Determination of fineness modulus and particle size distribution of coarse, fine and all-in aggregates./Determination of percentage bulking of fine aggregate sample./Determination of surface moisture (moisture content) of aggregates./Determination of impact value of aggregate using impact testing machine./Determination of abrasion resistance of aggregate using Los - Angeles abrasion testing machine./Determination of consistency of freshly mixed concrete of given proportions by slump test./Determination of workability of freshly mixed concrete of given proportion by compaction factor test./Determination of workability of fresh concrete by Vee-Bee consistometer./Determination of workability of fresh concrete using flow table./Determination of cube strength and cylinder strength of concrete of given proportions and given

water cement ratio./Determination of flexural strength of concrete of given proportions and given water cement ratio./Determination of split tensile strength of concrete of given proportions and given water-cement ratio./Plotting the stress-strain curve for concrete mix of given proportions and to determine the modulus of elasticity using an extensometer./Design of concrete mix by trial and error method/ Design of a concrete mix by Indian standard method given that cube compressive strength. Assessment of compressive strength of concrete using rebound hammer./Assessment of compressive strength of concrete using ultrasonic pulse velocity method./Determination of ultimate strength of beams./Determination of bond strength between concrete and ordinary mild steel bars./Determination of the ultimate strength of reinforced concrete beam.

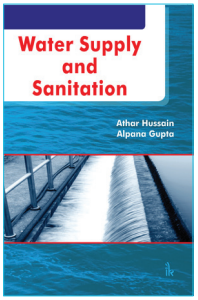
Audience – Undergraduates and postgraduates of civil engineering.

Shelving – Civil Engineeringtest./Determination of workability of freshly mixed concrete of given proportion by compaction factor test./Determination of workability of fresh concrete by Vee-Bee consistometer./Determination of workability of fresh concrete using flow table./Determination of cube strength and cylinder strength of concrete of given proportions and given water cement ratio./Determination of flexural strength of concrete of given proportions and given water cement ratio./Determination of split tensile strength of concrete of given proportions and given water-cement ratio./Plotting the stress-strain curve for concrete mix of given proportions and to determine the modulus of elasticity using an extensometer./Design of concrete mix by trial and error method/Design of a concrete mix by Indian standard method given that cube compressive strength. Assessment of compressive strength of concrete using rebound hammer./Assessment of compressive strength of concrete using ultrasonic pulse velocity method./Determination of ultimate strength of beams./Determination of bond strength between concrete and ordinary mild steel bars./Determination of the ultimate strength of reinforced concrete beam.

Audience – Undergraduates and postgraduates of civil engineering.

Water Supply and Sanitation

New



Athar Hussain
Alpana Gupta

ISBN: 978-93-90620-77-7/Year 2022
Size: 18 cm × 24 cm/Pages 560
Paperback/₹ 525.00

Water scarcity and sanitation are two major challenges that are affecting over 40% of the global population. More than 80% of the waste water resulting from human activities is dumped in rivers or the sea without any kind of water treatment. To respond to this crucial need, appropriate technologies of water treatment and supply are discussed in this book. A unique feature of this book is the way in which chapters interact. Cross-references between theory and application foster overall integration of subject matter. This volume will assist process engineers, water treatment plant operators and managers, environmental consultants, water treatment plant operators, U.G. and P.G. students of civil, environmental and chemical engineering.

Recommendations of various Indian Standards pertaining to the subject including Water Manual by Central Public Health and Environmental Engineering under Ministry of Urban Development has been incorporated and followed. All the chapters are organised with definitions, design principles and theories.

Salient Features:

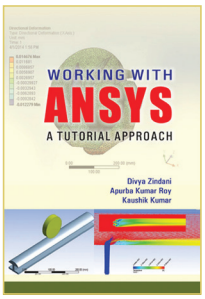
- Assessment of various types of water demands and population forecasting methods
- Design of water intake structures for surface and groundwater sources.
- Parameters that pertain to the quality and characteristics of water used for public supplies along with standard limits
- Various methods used in water treatment systems
- Design aspects of water treatment unit
- Disinfection processes used after treatment and before water supply
- Design of various types of water supply and distribution systems
- Water transmission pipes, pumps and pumping stations and appurtenances used for the water supply.

Contents:

Water Demands/Sources of Water Supply/Quality and Characteristics of Water/Water Treatment/Filtration/isinfection/Water Distribution and Supply/Water Transmission Pipes, Pumps and Pumping Stations/Water Main Appurtenances/Index

Audience – U.G. and P.G. Students of Civil, Environmental, and Chemical Engineering.

Working with ANSYS A Tutorial Approach

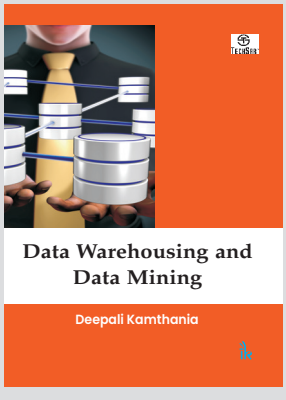


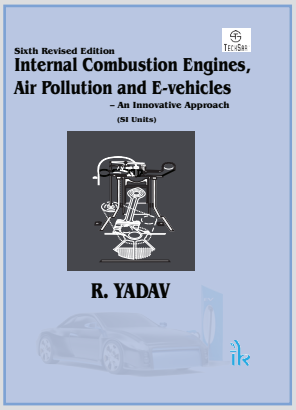
Divya Zindani
Apurba Kumar Roy
Kaushik Kumar

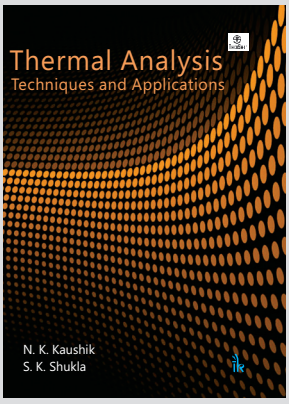
ISBN: 978-93-85909-26-9/Year 2016
Size 18 cm × 24 cm/Pages 640
Paperback/₹ 850.00

(See on page 115)

NEW RELEASES







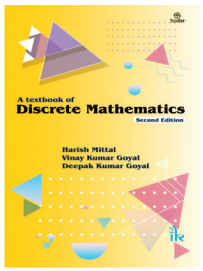
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

A Textbook of Discrete Mathematics

Second Edition

New



Harish Mittal
Vinay Kumar Goyal
Deepak Kumar Goyal

ISBN: 978-93-90620-25-8/Year 2023
Size 18 cm × 24 cm/Pages 438
Paperback/₹ 525.00

Discrete mathematics is the part of mathematics that is devoted to the study of discrete objects. Discrete mathematics provides the mathematical foundations for many computer science courses, including data structures, algorithms, database theory, automata theory, computer security, and operating systems.

This book explains the basic principles of Discrete Mathematics and structures in five sections, settheory, relations and functions, probability and counting techniques; recurrence relations, propositional logic; lattices and Boolean Algebra; study of graphs and trees and algebraic structures and finite state machines.

In this Second Edition new and revised material is added related to number theory includingthe well-ordering principle, Principles are also given of mathematical induction, division algorithm and the Euclidean algorithm with suitable examples and exercises.

Salient Fetures:

- Covers relevant topics in discrete mathematics and computation theory with an emphasis on their applicability as mathematical tools in computer science.
- Introduces the concept of mathematical logic, concepts of sets, relation, functions and Boolean algebra.
- Introduces the concept of algorithm and number theory.
- Understanding of group theory and graph theory with related examples and their use for solving problems.
- New and revised examples and exercises

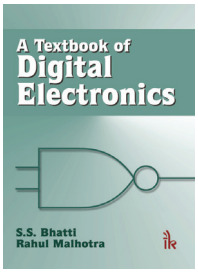
Contents:

Sets/Relations and functions/Techniques of counting/Partial ordering relations/Discrete probability/Recurrence relations/Logic/Lattices/Boolean algebra/Graph theory/Trees/Algebraic system/Finite state machine/Index

Audience – B.E.&B.Tech students

A Textbook of Digital Electronics

S.S. Bhatti • Rahul Malhotra

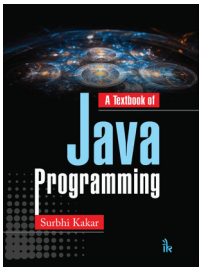


ISBN: 978-93-81141-51-9/Year 2012
Size 18 cm × 24 cm/Pages 270
Paperback/₹ 395.00

(See on page 65)

A Textbook of Java Programming

Surbhi Kakar



ISBN: 978-93-85909-66-5/Year 2017
Size 18 cm × 24 cm/Pages 422
Paperback/₹ 495.00

This book covers all the core java concepts of java programming language. It also touches some of its advanced concepts. It starts with some basic concepts like data types, control structures, and classes. It also discusses exception handling, multithreading and java libraries. Further, it explains how to interact with client side applications like applets and handling events. The last section focuses on network communications through java.

The book is designed to give a fillip to the concepts of java programming. Java programming has been variously conceptualized by experts across the world. The subject forms the basis for software development. Therefore, understanding the nuances of the subject is significant for students of Information Technology. This book proposes to be an integration of the theoretical aspects of java programming complemented with the implementation of the same in real world situations. The book would be all encompassing covering the myriad aspects of the subject passing through the latest developments in the same covering the syllabus of institutions all over the country.

Salient Features:

- Explains how to interact with client side applications like applets and handling events
- Graphical user interface programming and networking using various java libraries
- An integration of the theoretical aspects of java programming complemented with the implementation of the same in real world situations
- Proposes to be a ready reckoner for software developers

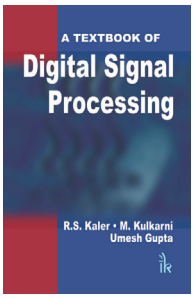
Contents:

Introduction/Data types, variables and Arrays/Operators/Control Structures/Fundamentals of Classes and Objects/More about Classes/Inheritance/Packages and Interfaces/Exception handling/Multithreading/Java Libraries/Applets and AWT/Event Handling/Networking

Audience – BCA, MCA, B.Tech, MSc (IT), M tech students. Software developers

A Textbook of Digital Signal Processing

R.S. Kaler • M. Kulkarni • Umesh Gupta

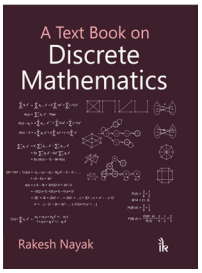


ISBN: 978-93-80026-15-2/Year 2009
Size 18 cm × 24 cm/Pages 744
Paperback/₹ 575.00

(See on page 51)

A Textbook on Discrete Mathematics

C.V. Sastry
Rakesh Nayak



ISBN: 978-93-86768-69-8/Year 2020
Size: 18 cm × 24 cm/Pages 253
Paperback/₹ 345.00

This book attempts to put together all the essential topics of discrete mathematical structures for easy reference. The undergraduate students of computer science and engineering, postgraduate students of computer applications and computer science and engineering will find this book very useful. It contains several multiple-choice questions under each chapter which will be useful for those who aspire to write the GATE examination.

Salient Features:

- Covers all the important topics of discrete mathematics.
- Proofs of all important theorems have been given.
- Concepts are well supported with suitable examples and diagrams.

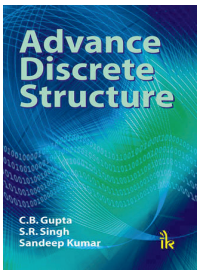
- Includes review questions as well as MCQs with answers.
- Critical examples with stepwise explanations, makes it a great instructor resource.

Contents:

Logic/Sets, Relations and Functions/Posets and Lattices/Algebras/ Graph Theory/Generating Functions and Recurrence Relations/ Finite State Automaton/Permutations and Combinations: Pigeonhole Principle Probability/Number Theory/Bibliography/Index

Audience – B.E & B.Tech students of Computer Science, Computer Science and Engineering.

Advance Discrete Structure



C.B. Gupta • S.R Singh
Sandeep Kumar

ISBN: 978-93-80578-48-4/Year 2010
Size 16 cm × 24 cm/Pages 512
Paperback/₹ 605.00

This book is meant for the graduate and postgraduate students pursuing courses in mathematics as well as in computer engineering.

This book covers the topics from Sets, Relations, Functions, Propositional logic, Techniques of proof, Lattice, Algebraic structures, Boolean algebra Combinatorics, Discrete numeric function, generating function and recurrence relation and graph theory.

In this book each chapter starts with a clear statement of pertinent definitions, principles and theorems with illustrative and descriptive material. A large number of solved examples help to illustrate and amplify the material and also include proof of the theorems.

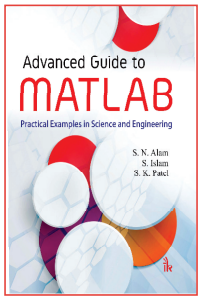
Contents:

Theory of Sets/Relations/Functions/Propositional Logic/Techniques of Proof/Poset and Lattices/Groups/Semigroup and Monoid/ Boolean Algebra/Combinatorics/Discrete Numeric Functions, Generating Functions and Recurrence Relations/Basic Concepts of Graph Theory/Trees/Planar Graphs and Colouring/Index.

Audience – M.Tech., MCA, M.Sc., B.Tech, BCA, B.Sc. etc.

Advanced Guide to MATLAB:

Practical Examples in Science and Engineering



S.N. Alam • S. Islam • S.K. Patel

ISBN: 978-93-84588-35-9/Year 2015
Size 18 cm × 24 cm/Pages 418
Paperback/₹ 665.00

A sequel to *Understanding MATLAB: a Textbook for Beginners*, which has been published earlier, this book is an advanced-level guide to MATLAB with a number of applications in science and engineering. There are a number of solved problems from all important areas of science and engineering to give enough practice to the reader. MATLAB integrates computation, visualization and programming in a very user-friendly and easy-to use environment.

This book is mainly aimed at those who already know the basics of the language and would like to use MATLAB to solve advanced engineering problems. Here, in this book, the authors have tried to illustrate the advanced features of MATLAB.

Salient Features:

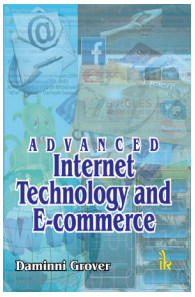
- Provides a crisp discussion on the history and evolution of MATLAB.
- Discusses the MATLAB compiler and how it works.
- Detailed treatment of numbers, matrices and matrix operations.
- Dedicated chapters on plotting, image processing, and animations, sounds and movies.
- Comprehensive coverage of numerical methods.
- A separate dictionary of additional terms at the end of the book.
- A separate chapter on solved problems.
- Step by step discussion of solved problems.
- Abundant sample codes, algorithms, and flowcharts.

Contents:

History of computers, computer languages and MATLAB/The compiler/Numbers, review of matrices and matrix operations/ Plotting using MATLAB/Image processing using MATLAB/ Animation, sound and movies using MATLAB/Numerical methods using MATLAB/Unconstrained single variable optimization methods/Statistical functions/Dictionary of additional terms/Index

Audience – B.E. & B.Tech., computer science and electronics engineering.

Advanced Internet Technology and E-commerce



Daminni Grover

ISBN: 978-93-82332-44-2/Year 2013
Size 18cm × 24cm/Pages 400
Paperback/₹ 525.00

Advanced Internet Technology and E-commerce is a thorough and practical guide for developing Internet applications and e-commerce solutions. The book provides the required knowledge and skills in advanced Internet technologies particularly related to server-side Internet programming and business-to-business systems. While learning various state-of-the-art web technologies, readers will also learn how to construct distributed Internet applications.

The audience can be divided into two segments. The first segment is the undergraduate and postgraduate students of IT programs. This book is based upon the undergraduate and postgraduate syllabus of various universities. The second is for the computer professionals who may be interested in knowing advanced Internet technology concepts and related programming and scripting languages.

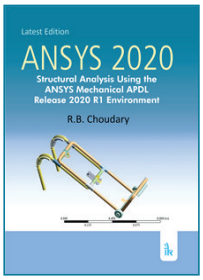
Contents:

Introduction to Advanced Internet Programming and Protocols/ Server Side Scripting Through JavaScript/Server Side Scripting through VBScript/Advanced Web Technologies – Java Beans, JDBC, CORBA, RMI/Server-side Scripting through ASP.NET/Server-side Scripting through CGI/Server-side Scripting through PHP and XML/Server-side Scripting through ADO.Net/Server-side Scripting through VB.Net/Ecommerce and Internet Security

Audience – Undergraduate and postgraduate students of IT and computer professionals.

ANSYS 2020

Structural Analysis Using the ANSYS Mechanical APDL Release 2020 R1 Environment



R B Choudary

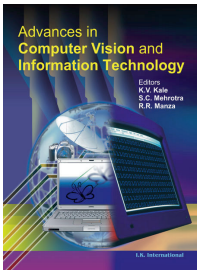
ISBN: 978-93-90620-46-3/Year 2021
Size: 18 cm × 24 cm/Pages 320
Paperback/₹ 895.00

(See on page 86)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Advances in Computer Vision and Information Technology



Editors

K. V. Kale • S. C. Mehrotra
R. R. Manza

ISBN: 978-81-89866-74-7/Year 2008
Size 18 cm × 25 cm/Pages 1690
Hardback/₹ 4995.00

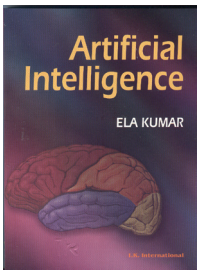
The present treatise comprising 225 articles broadly covers the following topics exhaustively.

Contents:

Advance Networking and Security/Wireless Networking/Cyber Law/Advance Software Computing/Artificial Intelligence/ Natural Language Processing/Neural Networks/Bio-Informatics/ Biometrics/Data Mining/E-commerce/E-Learning/Image Processing, Content Based Image Retrieval, Medical and Bio-Medical Imaging, Wavelets/Information Processing/Audio and Text Processing/ Cryptology, Steganogarphy, and Digital Watermarking/Pattern Recognition/Machine Vision/Image Motion, Video Processing/ Signal Processing and Communication/Remote Sensing/Speech Processing & Recognition, Human Computer Interaction/Information and Communication Technology.

Audience – Profesionals in Computer and Information Technology.

Artificial Intelligence



Ela Kumar

ISBN: 978-81-906566-6-5/Year 2008
Size 16 cm × 24 cm/Pages 480
Paperback/₹ 465.00

Artificial Intelligence (AI) is an emerging discipline of computer science. It deals with the concepts and methodologies required by computer to perform an intelligent activity. The spectrum of computer science is very wide and it enables the computer to handle almost every activity, which human beings can. It deals with defining the basic problem from viewpoint of solving it through computer, finding out the total possibilities of solution, representing the problem from computational orientation, selecting data structures, finding the solution through searching the goal in search space dealing, with the real world uncertain situations etc. It also develops the techniques for learning and understanding, which make the computer able to exhibit an intelligent behaviour. The list is exhaustive and is applied nowadays in almost every field of technology.

This book presents almost all the components of AI like problem solving, search techniques, knowledge concepts, expert system and many more in a simple language. One of the unique features of this book is inclusion of number of solved examples; in between the chapters and also at the end of many chapters. Real life examples have been discussed to make the reader conversant with the intricate phenomenon of computer science in general, and artificial intelligence in particular. The book is primarily developed for undergraduate and postgraduate engineering students.

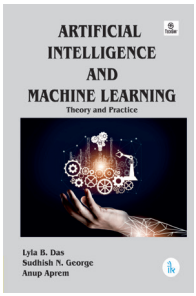
Contents:

Introduction/Problem solving through AI/Heuristic Search Techniques Introduction to Knowledge/Logic/Advanced Knowledge Representation/Programming Languages/Reasoning with Uncertainty/Natural Language Processing/Machine Learning, Planning and Understanding/Applications of AI/Expert systems/ Refrences/Index.

Audience – B.E. & B.Tech., Computer Science and Electronics Engineering.

Artificial Intelligence and Machine Learning: Theory and Practice

New

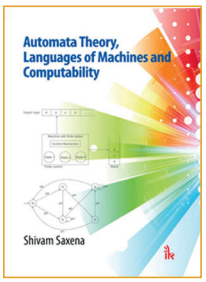


Lyla B. Das
Anup Aprem

ISBN:978-93-90620-09-8/Year 2023
Size: 18 cm × 24 cm/Pages 580
Paperback/₹ 695.00

(See on page 67)

Automata Theory, Languages of Machines and Computability



Shivam Saxena

ISBN: 978-93-86768-07-0/Year 2018
Size 18 cm × 24 cm/Pages 326
Paperback/₹ 375.00

The book is all about the automata, formal language theory and computability. Automata theory plays important roles in compilers, text processing, programming languages, hardware designs, artificial intelligence and is the core base of computer science studies. The intent is to make automata theory interesting and challenging and break the myth of being a tough topic. For that matter, topics are covered in an easy to understand manner with the help of elaborative and well descripted examples. For topics which are little complex and fuzzy to understand, strategy adopted is to connect the topic with the everyday problems we encounter, in order to develop a connective understanding of the topic and get a clear view of the topic. Exercise questions are provided with the answers to understand the solution easily.

Salient Features:

- To understand automata theory, languages of machines and computability in an easier and interesting way.
- Tough topics are covered in the way that is relatable to daily life which enables the reader to grasp the topic easily.
- Exercise questions along with the solutions to understand the solutions of the queries.
- Along with elaborative solved examples, questions from various universities exams; also includes solved GATE and UGC-NET questions.

Contents:

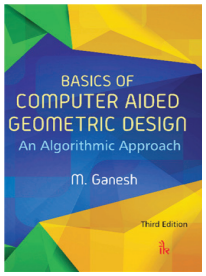
Introduction to Theory of Computation/ Finite Automata/ Finite Automata as Transducers/ Regular Expressions and Regular Grammar/ Context-Free Grammars/ Normal Forms of Context-Free Grammars/ Pushdown Automata/ Turing Machines/ Hierarchy of Formal Languages and Automata/ Introduction to Undecidability/ Recursive Function Theory/ Computational Complexity and Its Classes/ Solutions to Exercises/ Index.

Audience – Computer Science/Engineering students, students preparing for competitive exams like GATE, UGC-NET, etc.

Basics of Computer Aided Geometric Design

An Algorithmic Approach

Third Edition



M. Ganesh

ISBN: 978-93-84588-41-0/Year 2019
Size 18 cm × 24 cm/Pages 314
Paperback/₹ 545.00

In this third edition of the book, two new chapters have been added (case studies and steps to develop a profile, curve and surface) illustrating the applications of the methods developed in the book and demonstration of the methods to a practical problem. All the earlier chapters of the second edition have been completely rewritten and plenty of examples have been added.

The main aim of the book is to provide a good foundation of computeraided geometric design (CAGD) to the students of undergraduate (according to the US standard) courses in engineering – especially mechanical engineering, computer science, geometric modeling and CAD / CAM. It will also be useful to practising engineers and professionals working in the aeronautical and space research and in ship-building; car manufacturing and other areas requiring designing and fabrication of hulls, chassis and other engineering parts on a large scale; telephone set and mobile handset designing; washing machine and TV set designing; designer glassware industry; sport shoe upper designers; and so on.

Reflecting the advances that have taken place in the study and applications of CAGD, this book treats not only the theory aspects but also deals with a broad variety of topics relating to the applications. CAGD is a fast growing area, used in all kinds of manufacturing processes involving designing of geometric shapes and in computer graphics. CAGD cannot be learnt without a sound knowledge of differential geometry. So, the book starts with a study of differential geometry.

Since this book has been written mainly as a textbook for the undergraduate students of engineering institutes and colleges, the approach is lucid. Concepts introduced are always illustrated with worked out examples. A list of problems is also given at the end of each chapter so that the students can apply their knowledge in solving them and thereby learn more.

Contents:

Part I : Differential Geometry

Theory of Curves/Theory of Surfaces

Part II : Computer Aided Geometric Design

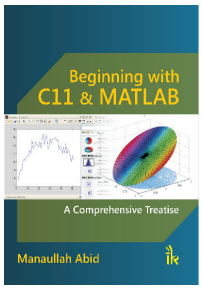
Bezier Curves/Bezier Surfaces/Spline Curves/Spline Surfaces

Part III : Advanced Topics in Computer Aided Geometric Design

Rational B-Spline Curves and Surfaces/Certain Assorted Methods/Certain Assorted Methods/Case Studies/Epilogue/Appendix/Index

Audience – All UG students of engineering, architecture and computer science; M. Tech/M. Arch courses on CAD; Practising design engineers.

Beginning with C11 & MATLAB



Manaullah Abid

ISBN: 978-93-82332-35-0/Year 2013
Size: 18 cm × 24 cm/Pages 312
Paperback/₹ 455.00

This book is meant for undergraduate students and users of MATLAB programs and those who want to be in pace with the developing technology. As C is used in a variety of areas from software development to hardware programming, including embedded system or driver writing or system programming, it is essential to have knowledge of this particular language.

This book will serve a large spectrum of programmers as well as MATLAB users of various fields both in academia and scientific research.

This book is arranged in two sections, namely, C11 and MATLAB. C11 section includes on the spot explanation of the program structure/skeleton in the beginning and leads towards larger program development by using various basic building materials of the language. This book mostly depicts programs using the concept discussed in that chapter.

MATLAB section is included for the UG students to have sound knowledge of MATLAB so that they can use this language for their research purposes.

Contents:

Section C11/Introduction/Data Classification/Operators/Input Output Statements/Control Structure/Derived & User Defined Data/Function/Pointer & Files/Linked List/Graphics

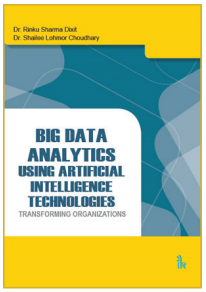
Section MATLAB/Beginning with MATLAB/Matrices and Arrays/Programming Fundamentals/Basic Program Components/Program Control Statements/Dates and Times/Uses of Symbols/Developing a Program/Graphics in MATLAB/Index.

Audience – Undergraduate students of Computer Science.

Big Data Analytics Using Artificial Intelligence Technologies

Transforming Organizations

New



Rinku Sharma Dixit
Shailee Lohmor Choudhary

ISBN: 978-93-90620-51-7/Year 2022
Size: 18 cm × 24 cm/Pages 336
Paperback/₹ 625.00

It was way back in 1990s that the term Big Data was first used. It is used to refer to data that is "huge, overwhelming, and in uncontrollable amounts". Such humongous data can be used for decision making using techniques of data analysis.

However, in the last two decades, the volume and speed with which data is generated has changed beyond measures of human comprehension. IDC (International Data Corporation) estimated the newly created data will reach close to 35 zettabytes (35 trillion gigabytes) by 2020. But by 2018 it was already at 33 zettabytes, leading IDC to predict that in 2025, 175 zettabytes (175 trillion gigabytes) of new data will be created around the world.The need to process and analyse these increasingly larger (and unstructured) data sets led to the transformation of traditional data analysis into 'Big Data Analytics' in the last decade. This transformation led to complete transformation of the organizational processes and the strategic decision making and also to the evolution of newer technologies and tools for handling and servicing the Big Data Architecture and Big Data Analytics.

This book has been designed for students (both graduates and postgraduates) and practitioners who want to understand all the concepts related to Artificial Intelligence, Big Data and Big Data Analytics, the related terminologies, technologies, and use cases in various domains. The examples and use cases provided in the book do not require a technical or conceptual skill set but an interest in the concerned domain to appreciate the problems and the results and advantages achieved through application of Intelligent Techniques. The book covers the concepts from the standpoint of a novice, so the readers need no prior knowledge of any tool or technology before reading this book. But the readers should have an inclination towards Statistics and Analysis to appreciate and understand the concepts.

Salient Features:

- Introduction of big data in organizations and the change in the perspectives of the decision makers with the insurgence of big data in organizations.
- Evolution and description of big data terminologies, characteristics, challenges and the supporting disciplines.
- The concepts of big data analytics and the various tools and technologies used for it.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400 info@ikinternational.com

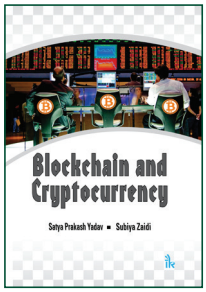
- The big data architectural framework, its components, challenges and examples.
- The various job roles that people play in big data analytics and the traits of each.
- The security, privacy and ethical concerns associated with big data analytics.
- The various converging technologies as IoT, Cloud, AI And ML, that evolved independent of each other but complement each other in the big data framework and lead to development of newer solutions and processes.
- What are the various storage platforms and how Cloud is an indispensable part of the big data architecture?
- Use cases of big data analytics in various managerial domains.
- Brief about tools such as MongoDB, Hadoop, Jasper Report using Jaspersoft, MapReduce, Hiveand Pig.

Contents:

Introduction of Big Data in Organizations: The Changing Perspectives /Basics of Big Data/Big Data Tools & Technologies/Big Data Architecture/Big Data for Data Driven Decisions: Applications/ People Component of BDA/Big Data: Privacy, Security and Ethical Concerns/Converging Technologies: Exploring New Dimensions/ Introduction to MongoDB/Big Data Analytics with Hadoop/Jasper Report Using Jaspersoft/Index

Audience – Graduates and postgraduates and practitioners. Artificial Intelligence, Big Data and Big Data Analytics.

Blockchain and Cryptocurrency



Satya Prakash Yadav
Subiya Zaidi

ISBN: 978-81-94867-60-9/Year 2020
Size: 16 × 24 cm/Pages 198
Paperback/₹ 295.00

Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system and this is done using Cryptography. A Cryptocurrency is a digital money that operates on the Blockchain technology. This book is intended to provide a detailed analysis of the effect of Blockchain and Cryptocurrency in the current market. It is designed with the focus to facilitate the students in understanding the working behind the raging technology. Blockchain and Cryptocurrency are vastly discussed nowadays in all research domains to bring decentralization. This book gives easy access to the complex terminologies revolving around the technology. Since this is a new course assigned in the curriculum, therefore special care is taken in drafting the units. The chapters have been written with reference to the past understanding of the students of cryptography and merging those concepts with the Blockchain technology.

The emphasis is laid on fundamental ideas and ease of understanding with suitable diagrammatic representation and real-world examples. This book is self-contained and requires no comparison and analysis with other conceptual data. It can also be used by beginners in the Blockchain technology and wish to dive deeper in its technological aspects. Numerous multiple-choice questions at the end of each chapter are given to test the objective understanding of the concepts.

Salient Features:

- Standard and precise definitions and tips.
- Popular Blockchain consensus protocols, their strengths, weaknesses and application scenarios through analysis and comparison.
- Several Blockchain examples essential for engineering students.
- Hints and explanations are given in the solution of every problem.
- Imperative real examples

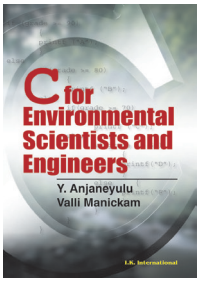
Contents:

Basics/Cryptography/Blockchain/Distributed Consensus/Cryptocurrency/ Cryptocurrency Regulation/Blockchain Applications/Index.

Audience – B.Tech, Computer Science/Information Technology.

C & Data Structures With Lab Manual

Second Edition



V.V. Muniswamy

ISBN: 978-93-80026-83-1/Year 2009
Size 18 cm × 24 cm/Pages 540
Paperback/₹ 505.00

This text is intended for one year (or two-semester) course in "C Programming and Data Structures". This is a very useful guide for undergraduate and graduate engineering students. Its clear analytic explanations in simple language also make it suitable for study by polytechnic students. Beginners and professionals alike will benefit from the numerous examples and extensive exercises developed to guide readers through each concept. Step-by-step program code clarifies the concept usage and syntax of C language constructs and the underlying logic of their applications. Data structures are treated with algorithms, trace of the procedures and then programs. All data structures are illustrated with simple examples and diagrams.

The concept of "learning by example" has been emphasized throughout the book. Every important feature of the language is illustrated in depth by a complete programming example. Wherever necessary, pictorial descriptions of concepts are included to facilitate better understanding.

The common C programs for the C & Data Structures Laboratory practice appended at the end of the book is a new feature of this edition.

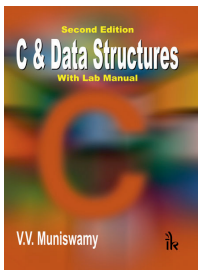
Exercises are included at the end of each chapter. The exercises are divided in three parts: (i) multiple-choice questions which test the understanding of the fundamentals and are also useful for taking competitive tests, (ii) questions and answers to help the undergraduate students, and (iii) review questions and problems to enhance the comprehension of the subject. Questions from GATE in Computer Science and Engineering are included to support the students who will be taking GATE examination.

Contents:

Algorithms/Overview of C/C Fundamentals/Operators and Expressions/Input and Output/Flow of Control/Functions/ Arrays/Strings/Pointers/Structures/Data Files/Preprocessor/Data Structures/Linked Lists/Stacks/Queues/Binary Trees/Graphs/ Searching and Sorting/Appendices/References/Index/Lab Manual.

Audience – Undergraduate and Graduate Engineering students.

C for Environmental Scientists and Engineers



Y. Anjaneyulu • Valli Manickam

ISBN: 978-81-88237-78-4/Year 2008
Size 16 cm × 24 cm/Pages 436
Paperback/₹ 475.00

Nowadays computers have become ubiquitous in almost all areas of education, be it science, engineering, arts or any other stream. Particularly biology and other natural science students often have to struggle with enormous data related to the field applications of scientific information. And computational technology becomes much more important when multiple factors have to be considered, compromised or contained in the field of environmental management.

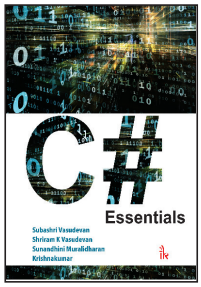
Primarily, C language is used in the field of academics. In this book the authors have provided a simple and direct approach to the practical utilization of C programming for Environmental Management degree course and other natural science and technology students. The treatment of the subject is simple and user-friendly so that anyone not familiar with C language but having basic acquaintance with computers can also use it and be benefited.

Contents:

Introduction to Computers/Algorithms, Pseudocode and Flow Charts/Introduction to C/Numerical Constants and Variables/ Input/Output Statements/Arithmetic, Logical and Relational Expressions/Conditional Statements/Looping Statements/Arrays/ Functions/Character Data and Strings/Pointers/Structures/Files/ The C Preprocessor/Low Level Programming/Some Examples of C Programs/Programs for Calculations in Chemical Analysis/Some Design Aspects of Water Treatment Systems/Some Design Aspects of Waste Water Treatment Systems/Design of Air Pollution Control Systems/Appendix/Index.

Audience – Environmental Management Degree Course and Other Natural Science and Technology Students.

C# Essentials



Subashri Vasudevan
Shriram K Vasudevan
Sunandhini Muralidharan
Krishnakumar

ISBN: 978-93-84588-58-8/Year 2015
Size 18 cm × 24 cm/Pages 256
Paperback/₹ 405.00

The book offers a hands-on approach on the treatment of C# language and programming aspects, by bringing in practical examples and down-to-earth explanations. The treatment begins with .Net framework and the reasoning of choosing C#, goes on to discuss the branching and looping construct codes, then moves on to C# language nuts and bolts, and finally into the programming aspects, in a logical manner. This book has been written in such a way that even a novice programmer would be able to code in C# after he/she goes past initial few chapters. All the concepts -- be it advanced or a simple one -- are explained with enough examples and clean explanations. The applications include web applications which one can access through internet, windows application which can act as a standalone executables, web service apps which will enable communication between client and server, and much more!

The book has been conceptualized to meet the curricular need of the B. Tech students of computer programming, object oriented programming, .Net programming and C# programming. M. Tech students, researchers and programmers will find this book to be a useful resource.

Salient Features:

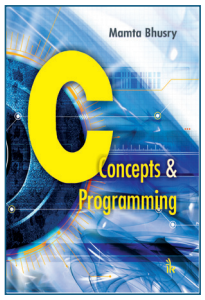
- "Learning objectives" at the beginning of the chapters, to check progress
- "Points to remember," to help recapitulating and internalizing important points
- End-of-chapter exercises called "Try it out," to help apply the concepts learned
- Sample codes and corresponding results, to aid cross-checking
- Pictorial representation and screenshots of important concepts, to aid better understanding and recall
- Sample application on "Windows application" at the end of the book, to give a real-world feel

Contents:

Introduction to .Net Framework/Branching and Looping/Getting Started with the Concepts in C#/Towards Object Orientation/The Collections Namespace/Multi Threading in C#/File Handling in C#/LINQ in C#/More on C#/Sample C# Application: Windows Application/Index

Audience – B.Tech/M.Tech students of computer science and engineering, and programming professionals.

C: Concepts & Programming



Mamta Bhusry

ISBN: 978-93-85909-30-6/Year 2017
Size 18 cm × 24 cm/Pages 512
Paperback/₹ 525.00

C: Concepts & Programming provides an up-to-date, comprehensive and class-tested content on the C Programming Language preceded by a crisp account of computer fundamentals. The book focuses on the organization and sequence of concepts so that the readers gradually proceed from the basic grammar of the C language and eventually attain a level where they can independently and confidently design and write C programs. The book follows the ANSI C programming standard published by American National Standards Institute (ANSI) and the International Standards Organization (ISO). The program illustrations are based on the Turbo C/C++ compiler.

Salient Features:

- Concepts are supplemented with solved examples.
- Includes comments, test runs, pictorial representations and memory mappings.
- Each chapter is appended with focus points, review questions and programming exercises.
- Case studies have been included at the end of wherever chapters required.

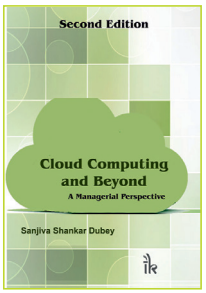
Contents:

Introduction to Computers/ Overview of C Language/ Constants, Variables, Data Types, Statements and Expressions in C/ Operators and Expressions/ Data Input and Output/ Selection and Looping Constructs/ Arrays 8. Character Arrays and Strings/ User-Defined Functions/ Pointers/ Structures and Unions/ File Management in C/ The C Preprocessor/ Appendix A: ASCII Values of Characters/ Appendix B: Operator Summary/ Appendix C: Library Functions/ Appendix D: Number Systems/ Appendix E: Escape Sequences/ Appendix F: Data Types and Data Conversion Rules/ Appendix G: Commonly used Scanf and printf Conversion Characters/ Appendix H: Control Statement Summary.

Audience – Graduate and undergraduate students of Computer Sciences.

Cloud Computing and Beyond: A Managerial Perspective

Second Edition



Sanjiva Shankar Dubey

ISBN: 978-93-86768-14-8/Year 2018
Size 16 cm × 24 cm/Pages 298
Paperback/₹ 425.00-

This book answers the following questions:

- Why Cloud Computing?
- What is Cloud Computing?
- How does Cloud Computing work?
- What are its challenges and opportunities and how to address them?
- What are the career opportunities in Cloud Computing area?
- What is Green Cloud Computing
- What is Cloud Data Security Management

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Cloud computing is rage these days. "It's become the phrase du jour," says Gartner, senior analyst, Ben Pring. This book attempts to unravel the mystery behind this buzzword. The primary objective is to provide the introduction to the current practices of Cloud Computing, also known as the Internet as a platform.

This book takes a cross-disciplinary approach covering topics in business, computer science, and information systems. Mainly focusing on cloud computing models, techniques, and architectures, this book provides knowledge and hands-on experience in designing and implementing cloud-based software systems. Topics included are advanced web technologies (AJAX and Mashup), distributed computing models and technologies (Hadoop and MapReduce), Infrastructure-as-a-Service (IaaS), Software as a Service (SaaS), Platform-as-a-Service (PaaS), virtualization, parallelization, security/privacy, and other issues in cloud computing. This book also explores the current challenges facing cloud computing.

This book has deep theoretical foundations of Cloud Computing and associated topics and case studies. Cloud Computing is one of the upcoming and sought after subjects in most IT companies. This subject will be useful to all professionals and B. Tech, MCA, M. Tech and MBA students.

This edition has two new chapters which are most topical for current cloud implementation, namely:

- Green Cloud Computing
- Cloud Data Security Management

Contents:

Cloud Computing: What, Why, How, When/Cloud Computing Architecture/Underlying Technology for Cloud Computing/Cloud Business Models/Adoption Planning for Cloud/Managing Cloud Computing Challenges/Cloud Application/Cloud Computing: Emerging Standards and Governance Management/Green Cloud Computing/Cloud Data Security Management/Beyond Cloud Computing/Cloud Opportunities: Business and Career/Book Summary/Appendices

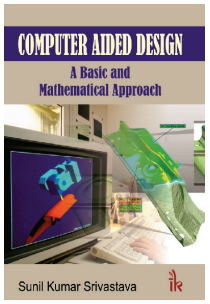
Audience – B. Tech, MCA, M. Tech and MBA students.

Computer Aided Design

A Basic and Mathematical Approach

Sunil Kumar Srivastava

ISBN: 978-93-81141-66-3/Year 2012
Size 18 cm × 24 cm/Pages 424
Paperback/₹ 505.00
(See on page 7)



Compiler Design

Sudha Rani S
Karthi M
Rajkumar Y

ISBN: 978-93-85909-65-8/Year 2019
Size 18 cm× 24 cm/Pages 760
Paperback/₹ 645.00



This book addresses the area related with compiler such as language, grammar, parsing, code generation and code optimization. This book imparts the basic fundamental structure of compiler in the form of optimized programming. The complex concepts such as top down parsing, bottom up parsing and syntax directed translation are discussed with the help of appropriate illustrations along with solutions. This book makes the readers decide, which programming language suits for designing optimized system software and products with respect to modern architecture and modern compilers.

Salient Features:

- Emphasis on basic principles.
- Example code that implements the concepts along with the theoretical discussion.
- Examples and solutions for clarifying the compiler design concepts.
- Simple symbol table implementation, operations, scope management and applications of symbol table.
- Code generation using register allocation and scheduling using graph colouring.
- Scheduling of a code and understand directed acyclic graph.

Contents:

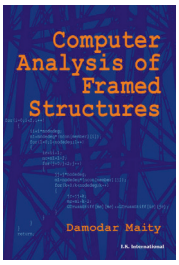
Introduction/Lexical Analysis/Syntax Analysis–I/Syntax Analysis – II/Syntax Analysis – III/Syntax Directed Translation/Runtime Environment/ Type Checking/Symbol Tables/Code Optimization/ Optimization Notion – I/Optimization Notion – II/ Optimization Techniques/Optimization Tuning Techniques/ Early Optimization/ Loop Optimization/Control Flow and Low Level Optimization/ Advanced Optimization/Assembler and Code Generation/Code Generation and DAG/Peephole Optimization/Interprocedural Analysis/Index.

Audience – Undergraduates in Computer Science, Information Technology and related fields.

Computer Analysis of Framed Structures

Damodar Maity

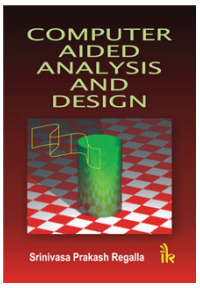
ISBN: 978-81-89866-19-8/Year 2007
Size 16 cm × 24 cm/Pages 248
Paperback/₹ 475.00
(See on page 8)



Computer Aided Analysis and Design

Srinivasa Prakash Regalla

ISBN: 978-93-80026-45-9/Year 2010
Size 16 cm × 24 cm/Pages 280
Paperback/₹ 345.00



The book has all the details required for the complete coverage of either undergraduate level or graduate level course on computer aided design for mechanical engineers, design engineers and civil and architectural engineers. Emphasis has been laid on explaining the concepts and techniques more from the practical and implementation standpoint so that the reader can begin hands-on and to enable the reader to write his own programs and design CAD systems for any mechanical element. Each chapter has a large number of solved and unsolved exercise problems. The book is complemented by several open ended projects, topics as well as partial details of solution, in all the chapters. Close knitting among the geometric modeling, computer aided engineering and applications such as rapid prototyping is a special feature of this book.

Spread in two parts containing 11 chapters the book broadly covers:

- Background of the CAD systems.
- Curve, surface and solid modeling techniques
- Rapid prototyping technology.
- Fundamental techniques of computer aided engineering
- Fundamentals of mechanical systems

- Numerical techniques for analysis of mechanical systems
- Finite difference method and finite element method.

Contents:

Part – I: GEOMETRIC MODELING AND COMPUTER AIDED SYNTHESIS OF PRODUCT

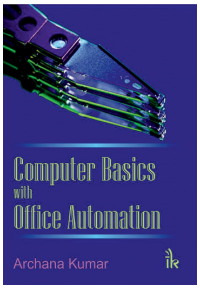
Introduction/CAD Systems/Geometric Modeling and Curve Modeling/Building Wire-Frame Models/Building Surface Models/ Solid Modeling/Rapid Prototyping and Manufacturing

Part – II: COMPUTER AIDED ENGINEERING OF PRODUCT

Fundamentals of Analysis of Mechanical Systems/Basic Methods of Computer Aided Engineering/Advanced Methods: Finite Difference Method/Finite Element Analysis/Appendix/Bibliography/Index.

Audience – Mechanical, Design, Civil & Architectural Engineers.

Computer Basics with Office Automation



Archana Kumar

ISBN: 978-93-80578-62-0/Year 2010
Size 18 cm × 24 cm/Pages 334
Paperback/₹ 435.00

The book covers the entire gamut of Computer Fundamentals concepts in detail. The book covers the course content of M.Tech, B.Tech, BCA, MCA, B.Sc. (Computers) of various universities.

The book will be useful for undergraduates and first year students of Information Technology and Management courses.

Spread in 7 chapters it broadly covers:

- Introduction to Computers.
- Algorithms and Flowcharts with examples
- Operating System, DOS, batch Files
- Windows Operating Systems
- Editors and Word Processors, Desktop Publishing, MS-WORD
- Spreadsheets and Database packages like MS-Excel and MS-Access, MS-Power Point
- Linux, Linux File System, Linux Commands, Permissions and Nodes, I/O redirections, Pipes and VI- Editors.

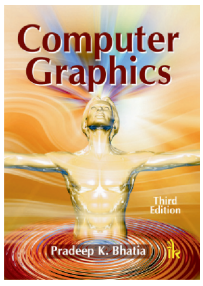
Contents:

Introduction to Computers/Algorithms and Flowcharts/Operating System/Windows Operating System/Editors and Word Processors/ Spreadsheets and database packages/Linux/Index

Audience – M.Tech, B.Tech, BCA, MCA, B.Sc. (Computers).

Computer Graphics

Third Edition



Pradeep K. Bhatia

ISBN: 978-93-82332-51-0/Year 2013
Size 18 cm × 24 cm/Pages 422
Paperback/₹ 485.00

The present book provides fundamentals of Computer Graphics and its applications. It helps the reader to understand:

- how computer hardware interacts with computer graphics;
- how it draws various objects, namely, line, circle, parabola, hyperbola, etc.;
- how realistic images are formed;
- how we see pictures move; and
- how different colors are generated from visible light.

At every stage, de`tailed experiments with suitable figures are provided.

More than 250 unsolved problems have been given at the end of chapters in the book. A large number of solved examples and programs in C are provided in the Appendices.

Salient Features:

- Coverage of illumination models and shading models.
- Discussion of algorithms.
- Solved exercises at the end of chapters.
- Inclusion of computer graphics related mathematics.

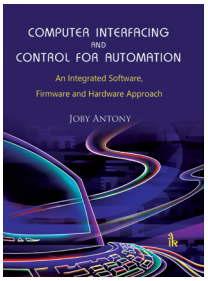
Contents:

Segment/Introduction to Computer Graphics/Display Devices/ Interactive Devices/Scan Conversion/2-D Transformations/2D Viewing Transformation and Clipping/3-D Transformations/ Projection/3-D Viewing and Clipping/Hidden Lines and Hidden Surfaces/Bezier Curves and B-Splines/Animation

Audience – BCA, BE/B.Tech (CSE/IT), MCA and DOEACCB students.

Computer Interfacing and Control for Automation: An Integrated Software, Firmware and Hardware Approach

New



Joby Antony

ISBN: 978-93-86768-65-0 /Year 2017
Size 18 cm × 24 cm/Pages 1024
Paperback/₹ 1195.00

The book adopts a "learning through doing" approach. Each chapter deals with a major topic in computer control system design related to hardware, firmware and software. The chapter proceeds as a series of practical experiments -- the reader sets up a simple hardware system, develops and downloads a simple program, and immediately observes and tests the outcomes. The book then reflects on the experimental results, evaluating the strengths and weaknesses of the technology or technique introduced, explores how precise the link is between theory and practice, and considers scaling up the applications in the wider context. This is one of the few books that explains how to automate a lab, industry, etc., using own proprietary or commercially made instruments using hardware, firmware and software.

The book can be used by automation engineers in the industry, physicists working in an experimental setup, embedded system engineers and students who are interested in PC interfacing projects. Every chapter accommodates all the interfacing buses, hardware firmware and software design.

Salient Features:

- Hands-on introduction to the field of microcontroller interfacing, PC interfacing, automation, computer controls, and sensor data acquisition
- Fast prototyping of hardware, firmware and software for control and data acquisition
- Basic embedded system concepts, through simple and effective experimentation
- ARM and ATMEL technology and interfacing, and their use
- Practical introduction to embedded firmware programming using C++ basics
- Develops interfacing GUI using Visual Basic, Qt and LabView
- Interfacing standards like RS232, GPIB, PLC Modbus, SCADA, CAMAC and VME
- Protocols like http, RPC, SPI etc., and techniques like PID using Ethernet-based embedded web clients
- Network analysis tool "wireshark" and interfacing of PLC, VFD, HMI, CAN, ETHERNET, and USB.
- Combines the ARM mbed technology with a simple low cost "breadboard" approach for simplifying applications

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

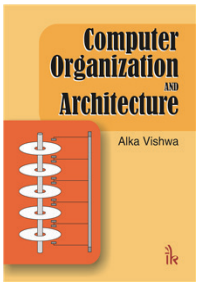
+91-011-43205400
info@ikinternational.com

Contents:

RS-232 Serial Communication/LabVIEW programming basics for control GUI design/Microcontroller based embedded Design: Hardware Engineering/Proportional Integral Derivative (PID)/Data Logging and Supervisory Control (DSC) via RS485 Modbus using LabVIEW/Scoda Using wonderware intouch/Programmable Logic Controllers hmi and Variable Frequency Drives (PLC and VFD)/ C++ for any design: lay strong foundation first/Firmware using ARM mbed Micro controller & cloud compiler/GUI designs Using Qt A C++ tool kit/Introduction to web Automation basics, h/w Accessories /Computer Automated Measurement and Control (CAMAC) & vme bus/Field-Programmable Gate Arrays (FPGAs)/General purpose Interface Bus (GPIB)/Webserver and Interfacing: A Web I/O Server/ Wireshark for network analysis/Microcontroller based Ethernet HTTP Clients and Interfacing/Controller-Area Network (CAN)/ Labview Fpga Real Time & cRio Interfacing/Android App Inventor & Interfacing/Internet of Things (IoT) & Interfacing/Appendix 1: Electronic Design Process (EDP)/Appendix 2: code of qt gui/ Appendix 3: Learn Python script for Interfacing

Audience – B.Tech and M.Tech students of Instrumentation and Control and Computer Science, Researchers, Automation Engineers, Control Engineers and Automation Scientists.

Computer Organization and Architecture



Alka Vishwa

ISBN: 978-93-82332-47-3/Year 2013
Size 18 cm × 24 cm/Pages 384
Paperback/₹ 505.00

This book is designed for B. Tech and MCA tudents. It emphasizes the conceptual understanding of each topic. This book contains lots of solved numerical problems for better understanding of topic followed by unsolved numerical problems for practice. Each chapter contains previous years GATE questions related to the each topic with the answer key.

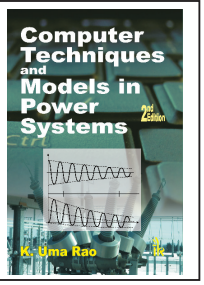
Contents:

Introduction to Computer Organization/Register Transfer Logic/ Data Representation and Logic Design/Computer Arithmetic/ Processor Organization/Pipeline and Vector Processing/Memory Organization/Input Output Organization/Appendix/References/ Index

Audience – B.E., B. Tech and MCA Students of Computer Science.

Computer Techniques and Models in Power Systems

Second Edition



K. Uma Rao

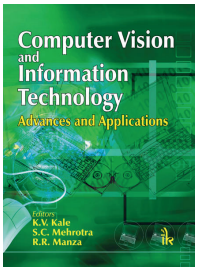
ISBN: 978-93-82332-31-2/Year 2014
Size 18 cm × 24 cm/Pages 634
Paperback/₹ 665.00

(See on page 55)

Computer Vision and Information Technology

Advances and Applications

Editors



K.V. Kale • S.C. Mehrotra
R.R. Manza

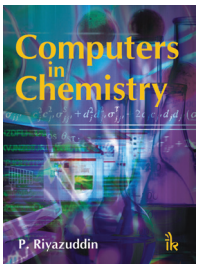
ISBN: 978-93-80026-95-4/Year 2010
Size 18 cm × 24 cm/Pages 1072
Hardback/₹ 3995.00

Spread in 133 articles divided in 20 sections the present treatises broadly discusses:

Part 1: Image Processing
Part 2: Radar and Satellite Image Processing
Part 3: Image Filtering
Part 4: Content Based Image Retrieval
Part 5: Color Image Processing and Video Processing
Part 6: Medical Image Processing
Part 7: Biometric
Part 8: Network
Part 9: Mobile Computing
Part 10: Pattern Recognition
Part 11: Pattern Classification
Part 12: Genetic Algorithm
Part 13: Data Warehousing and Mining
Part 14: Embedded System
Part 15: Wavelet
Part 16: Signal Processing
Part 17: Neural Network
Part 18: Nanotechnology and Quantum Computing
Part 19: Image Analysis
Part 20: Human Computer Interaction

Audience – Professionals in Computer and Information Technology.

Computers in Chemistry

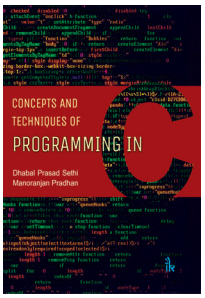


P. Riyazuddin

ISBN: 978-93-80578-75-0/Year 2011
Size 18 cm × 24 cm/Pages 440
Paperback/₹ 405.00

(See on page 122)

Concepts and Techniques of Programming in C



Dhabal Prasad Sethi
Manoranjan Pradhan

ISBN: 978-93-85909-98-6 /Year 2017
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 575.00

The C programming language is one of the most widely offered courses in the undergraduate programmes (all branches of BTech, BSc Computer Science, and BCA) as well as various postgraduate programmes (MCA, MSc Computer Science and others). Apart from students, the book will also be useful for aspirants of various competitive examinations and budding programmers. The book deals with the fundamentals of computers, algorithms and flowcharts, error handling, different data types, variables, operators, input/output operations, decision statements, looping, unconditional statements, functions, arrays, strings, pointers, dynamic memory management, structure and union, file and file handling, and preprocessor directives.

Salient Features:

- Systematic treatment of the subject, with coverage of all the essential topics of the C programming language.
- Includes program codes for every topic, for students in developing programming aptitude.

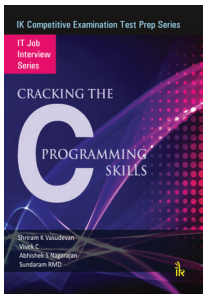
- Contains "important tips to remember" which will address the students' specific requirements.
- Learning aids include Summary, Short Questions, Long Questions, Objective Questions with Answers.

Contents:

Introduction to Computer Fundametals and Problem Solving/ Algorithm and Flowchart/Introduction to C Programming/Variable, Constants and Data Types/Operator/Input and Output Operation in C/Decision Making Statements (Conditional Statements)/Looping/ Unconditional Statements/Function/Array/String/Pointer Structure, Union, Type Definition, Bit Field/File/Preprocessor Directive

Audience – Students of branches of B. Tech, BSc Computer Science, BCA, MCA, MSc Computer Science and others. Aspiring programmers

Cracking the C Programming Skills



Shriram K Vasudevan • Vivek C • Abhishek S Nagarajan • Sundaram RMD

ISBN: 978-93-85909-36-8/Year 2017
Size 18 cm × 24 cm/Pages 422
Paperback/₹ 475.00

The book elaborates on the basics of procedure oriented programming and the fundamentals of writing C codes. The most noticeable feature of the book is the complete technical guidance for IT interview. It contains MCQs with 4 or 5 interesting options which prompt the candidate to think over a broad range of compilers. A brief and convincing answer for all the questions has been provided. It goes on to cover aspects like functions and loops, which will help novice programmers to code properly. Each concept is covered using tracing to explain how the particular coding is constructed and real-time programs work to help users understand how to implement theoretical concepts and obtain outputs to assure validity of programs written. Elementary programming concepts like arrays, loops, assignment operators, functions, file processing, data structures, etc. have been covered in the book. The flow of the book is organized in such a way that even a fresh candidate can easily follow the flow of concept and master the language at a comparatively faster rate.

This book will act as placement assistant for the fresh IT candidates in the technical round © language).

Salient Features:

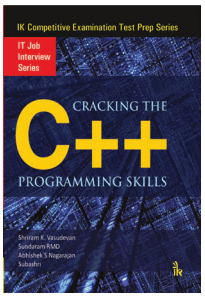
- A complete guide to crack the IT technical round C Language questions.
- Contains in-depth testing of many simple statements and snippets of code.
- Questions are framed out of box of some usual concepts giving unpredictable outputs making the candidates perform further open ended testing of the same concepts.
- In addition to assisting for interviews, this book supplements professionals to enhance his /her knowledge over the unknown parts of the language.

Contents:

Input & Output/Variables/Operators/Arrays/Control Statement/ Goto Statement/Looping Statement/Break And Continue/Pointers/ Functions/Built-In Functions/Scope/Modifiers/Type Casting Dynamic Memory Allocation/Structure/Union/Type Definition/ Enumerator/Files/Error Handling/Preprocessor Directive/More On Input/Output/The Final Touch/Eye Openers/

Audience – IT candidates in the technical round (C language).

Cracking the C++ Programming Skills



Shriram K Vasudevan • Sundaram RMD Abhishek S Nagarajan • Subashri V

ISBN: 978-93-85909-38-2/Year 2017
Size 18 cm × 24 cm/Pages 242
Paperback/₹ 405.00

This book aims to answer a wide range of questions one may have in C++. It concentrates on objective type questions with extensive answers which would help those who get themselves readied for interviews, while mastering the concepts. This book also makes sure, the beginners do not have difficulty in getting used to the C++ concepts. The levels of difficulty increases step by step, which would make the learning process a smoother one. Authors have made this publication more student-friendly by avoiding redundant words, materials, and dated models, presenting detailed descriptions, providing fewer lists, and using bold print to call attention to important terms.

It has been aimed with a distinct purpose of assisting students and specialists getting ready for several certification exams and technical interviews.

Salient Features:

- This book provides useful collection of sample interview questions and multiple-choice questions and their answers with appropriate explanations.
- It also reflects the growing complexity with which interviewing is being loomed and author has included the latest topics and questions discussed in top companies today while continuing to maintain the emphasis on basic problem solving skills for both students preparing for exams and for interviewees.
- Anyone wishing to sharpen his/her skills on C++ programming language or preparing for aptitude tests, competitive examinations should go through this book.
- This book also throws light on various methods of execution ranging from console inputs to command line arguments, unlike a usual academic question bank.
- The highlighting feature of this book is that it covers all aspects for a programmer to succeed in interviews as well to learn the nuances of programming. Not only programming, but also all the technical concepts.

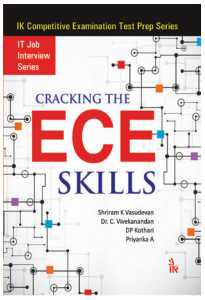
Contents:

C Vs C++/Class/Constructors And Destructors/Storage Class/ Dynamic Memory Allocation/Inheritance/Operator Overloading/ Function Overloading And Overriding/Frined Class And Frined Functions/Namespaces/Templates/Exception Handling/Files/ Macro And Include Directives/Conceptual Theory

Audience – IT candidates in the technical round (C language).

Cracking the ECE Skills

New



Shriram K Vasudevan
C. Vivekanandan
D.P. Kothari
Priyanka A

ISBN: 978-93-85909-53-5/Year 2018
Size 18 cm × 24 cm/Pages 214
Paperback/₹ 295.00

This book is organized into chapters systematically. For each chapter the questions along with multiple choice answers and the right answer with reasons are detailed in this book which makes it stand out from rest of the publications in similar areas. Each question has been marked with Level of difficulty identifier. As authors are from different domains namely, Computer science and Embedded System,

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info@ikinternational.com

Electrical and Electronics and communication engineering side, they have tried to cover all the major aspects of the interviews happening in these core areas.

The questions are selected in such a way that the reader is prepared to face any technical interview in the field of Electrical, Electronics, Computer networking, Communications, embedded systems, microprocessors, micro controllers, antennas and radars. This book helps engineers in gaining knowledge and develop problem solving ability in interpreting the machine requirements when they work in collaboration with systems, hardware and mechanical engineers to generate and design the machine types.

Salient Features:

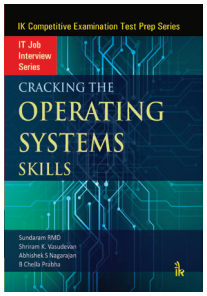
- Objective type questions book, focused more towards Electronics and Communication Engineering along with other closely related fields.
- Questions are selected in such a way that the reader is prepared to face any technical interview in these areas
- Communication engineering related questions discussed in this book will bring together all electrical engineering disciplines along with systems engineering knowledge to enhance telecommunication systems.
- Valuable for the readers to gain sufficient knowledge in object detection systems and crack the interviews

Contents:

Microprocessors, Microcontrollers and Embedded Systems/Digital Electronics/Communication Engineering/Electrical Machines/Basic Electrical and Electronics/Antennas and Radar/Computer Networks/Mechanical and Electronics

Audience – B.Tech. Students (Electrical and Electronics & Communication Engineering).

Cracking the Operating Systems Skills



Sundaram RMD
Shriram K Vasudevan
Abhishek S Nagarajan
B Chella Prabha

New

t

ISBN: 978-93-85909-37-5/Year 2018
Size 18 cm × 24 cm/Pages 230
Paperback/₹ 295.00

This book has been specifically designed to orient students for the technical interviews in Operating System concepts and help them undertake a thorough and objective preparation. The contents have been carefully handpicked from authors' experience and expertise developed by being either direct witness to the recruitment process, mentoring students in their colleges, myriad discussion with placement organizers in colleges, discussions on the topics in social media, blogs and dedicated websites. The book is focused for interview preparation in Operating System. The book includes the latest topics and questions discussed in top companies while continuing to maintain the emphasis on basic concepts along with problem-solving skills for students preparing for exams and for interviewees.

Salient Features:

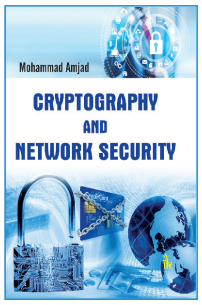
- Aimed with a distinct purpose of assisting students and specialists getting ready for several Certification Exams and Job Interviews.
- Multiple-choice questions to strengthen weaknesses and also enhance strengths.
- Sharpen skills on Operating systems or preparing for aptitude tests, competitive examinations.
- Covers all the nuances of programming.

Contents:

Introduction/Operating System Services/Process Management/Multithreading and Scheduling/Synchronization/Memory Management /File System and Storage/Input Output Systems and Security/Signals/Posix Threads Programming/Numeric Problems/Theoretical Questions

Audience – Students preparing for technical interview, Developers, Software engineers, and aspirants of other competitive examinations like GATE, IES, etc.

Cryptography and Network Security



M. Amjad

t

ISBN: 978-93-84588-56-4/Year 2015
Size 18 cm × 24 cm/Pages 440
Paperback/₹ 545.00

Salient Features:

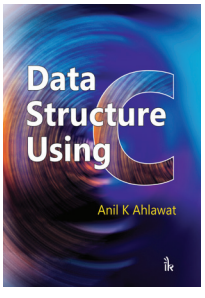
- Multiple choice questions based on in depth knowledge of various methods used in network security.
- Detailed coverage of Codes and Encipherment Techniques, Symmetric keyand Asymmetric key cryptography, Substitution Cipher, Monoalphabetic and polyalphabetic Ciphering.
- Detail discussion about Goals of Network security, types of attacks on network security and security mechanism.
- Provides sufficient number of examples in every chapter.
- Covers the latest topic of securing the low sized memory device like smart cards.
- One full chapter dedicated to wireless network security.
- Emphasis laid on Mathematics used in cryptography and network security.
- Exhaustive methods of steganography including audio and video steganography.
- Thorough discussion about Block ciphering and stream ciphering methods including DES, Feistel structure and AES.
- Coverage of modern Symmetric key Encipherment Techniques such as International Data Encryption Algorithm, RC4, RC5, RC6 and Blowfish.
- In depth Coverage of Digital signature, Message Authentication codes and key distribution systems.
- Detailed discussion about Message Digest algorithm, Kerberos, and X.509 Authentication Service.
- Comprehensively discusses system security, SSL,TLS, IDS and Firewalls.

Contents:

Introduction to the Security Concepts/Codes and Encipherment Techniques/Block Ciphers/Advanced Encryption Standard/Modern Symmetric Key Encipherment Techniques/Numbers Theory Used in Cryptography/Public Key Cryptography/Public Key Cryptosystem Used as Key Management/Authentication and Hash Algorithms/Digital Signature and Its Standard/Electronic Mail Security/Internet Security Protocols/IP Security and Firewall/System Security/Wireless Network Security

Audience – B. Tech and B.E Students.

Data Structure Using C



Anil K Ahlawat

t

ISBN: 978-93-86768-38-4/Year 2019
Size: 18 cm × 24 cm/Pages 400
Paperback/₹ 495.00

Data structure has the importance not only in Computer Science but for any discipline of engineering and technology where there is a requirement of appropriate data structures in program development.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Before solving a problem, a major decision is taken about which data structure will be used to represent the data. In this book, multiple stacks and multiple queues are added to represent more complex data structures.

This book broadly deals with:

- data structure, the basic operations and types of data structure
- single and multidimensional arrays and sparse matrices
- concepts, types, and implementation of linked list
- concepts of stacks, recursion and queue, their operations and applications and types
- circular, priority and double ended queues
- concepts of tree and binary search tree
- basic as well as advanced topics of tree
- basic terminology and representation of graph, shortest path algorithm
- sorting and searching algorithms and complexity of these algorithms
- file organization and different types of files

Salient Features:

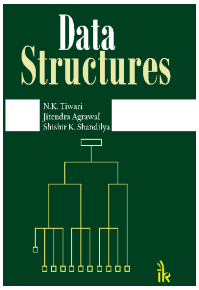
- Concise presentation of data structures with solved and programming problems
- How to write an algorithm and its implementation in C++
- A set of questions with answers for interviews.
- Sufficient number of problems and questions.

Contents:

Introduction/Array/Linked List/Stack and Recursion/Queue/Tree/Binary Search Tree/Graph/Sorting/Searching and Hashing/File/Interview Question with Answers/Important Question/Index

Audience – BE and BTech computer science students.

Data Structures



N.K. Tiwari • Jitendra Agrawal
Shishir K. Shandilya

ISBN: 978-93-84588-92-2/Year 2016
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 405.00

Data structure is a way of organizing data in a computer memory so that it can be used efficiently. Data structures can implement one or more particular abstract data types (ADT), which are the means of specifying the nature of operations and their complexity.

This book focuses on the design and analysis of basic data structures and their implementation and intends to provide a strong conceptual and empirical understanding of data structures. The contents of this book will help the students to understand that how the data structures are implemented and why these implementations are vital. The initial chapters deal with introductory part of the subject and the later chapters focus on advanced and difficult problems and algorithms. The book explains how data is organized in computer memory; how it operates; and why it is important. Appendixes provide further information on algorithms along with their programming solutions.

Readers of this book need only to be familiar with the basic syntax of C/C++ and similar languages.

This book will be useful for B.Tech/M.Tech Computer Science and Engineering, IT Engineering, BSc (IT)/MSc (IT), and BCA/MCA students.

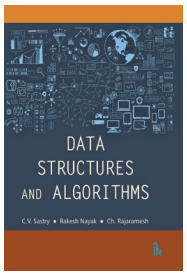
Contents:

Introduction/Array/Recursion/Stack/Queue/List/Tree/Graph Theory/Sorting & Searching/Tables

Audience – B.Tech/M.Tech Computer Science and Engineering, IT Engineering, BSc (IT)/MSc (IT), and BCA/MCA students.

Data Structures and Algorithms

New



C.V. Sastry • Rakesh Nayak
Ch. Rajaramesh

ISBN: 978-93-85909-84-9/Year 2018
Size 18 cm × 24 cm/Pages 334
Paperback/₹ 395.00

This book is the outcome of long years of teaching undergraduate as well as postgraduate students. It is an attempt to put together all the essential topics of data structures and algorithms for easy reference. The undergraduate students of computer science and engineering, postgraduate students of computer applications and computer science and engineering will find this book very useful. It contains several multiple-choice questions in each chapter which will be useful for those who aspire to write the GATE examination.

Salient Features:

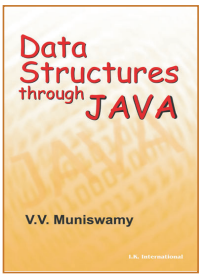
- A brief course on C-programming language to help students implement the algorithms.
- Data structures explained with simple relevant examples.
- Algorithms written in simple pseudocode and are easy to convert to any programming language.
- Concepts well supported with suitable examples and diagrams.
- Review questions as well as MCQs with answers.
- Critical examples with stepwise explanation makes it a great instructor resource.

Contents:

Introduction/Elementary Data Structures/Divide and Conquer Technique/Greedy Technique/Dynamic Programming/Backtracking/Branch and Bound Technique/NP-Hard and NP-Complete Problems/Bibliography/Index

Audience – UG and PG students of computer science, IT, computer applications, GATE/IES aspirants.

Data Structure through Java



V.V. Muniswamy

ISBN: 978-81-89866-82-2/Year 2008
Size 18 cm × 24 cm/Pages 408
Paperback/₹ 495.00

This book is designed for one-semester course in Data Structures through Java. This is a very useful guide for graduate and undergraduate students and teachers of Computer Science. This modern object-oriented approach to data structures helps students make the transition from a first course in programming to an integrated understanding of data structures and their applications. Carefully developing topics with sufficient detail, this text enables students to learn about concepts on their own, offering instructors' flexibility and allowing them to use the text as lecture reinforcement. It includes an exhaustive introduction to algorithms, an integral part of understanding data structures, and uses Java syntax and structure in the design of data structures. Its breadth of coverage insures that data structures and algorithms are carefully and comprehensively discussed.

Salient Features:

- Provides an understanding of fundamental data structures through clear explanations, illustrations, and exercises.
- Uses actual Java code for nearly all algorithms.
- Broad use of Java interfaces—defines and implements abstract data types. Gives students practical experience.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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- Clear and precise illustrations of program objects—aids students by providing clear visual images that help understanding and remembering.
- Explicit use of Abstract Data Types—clarifies the distinction between how the type is used and what makes it work.
- Includes exercises as well as many previous GATE questions.
- Accompanies CD-ROM containing Lab Manual.

Contents:

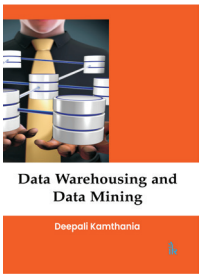
Java Basics/Java Classes and Objects/Inheritance/Packages and Interfaces/Exception Handling/Multi-Threading/Java Library/ Algorithms and Data Structures/Linked Lists/Stacks/Queues/ Trees/Search Trees/Heaps and Priority Queues/Hashing/Graphs/ Searching and Sorting/Text Processing/References/Index.

Audience – Graduate and Undergraduate students of Computer Sciences.

Data Warehousing and Data Mining

New

t



Deepali Kamthania

ISBN: 978-93-90620-60-9/Year 2022
Size: 18 cm × 24 cm/Pages 992
Paperback/₹ 725.00

The book is organized into 15 chapters. It consists of two sections. The book's first section covers data warehousing concepts and the steps required in creating a data warehouse for a decision support system along with data warehouse implementation case study. The second section provides a comprehensive introduction to data mining and is designed to be accessible and useful to students, instructors, researchers and professional. It includes data preprocessing, visualization, predictive modeling, association analysis, clustering, and anomaly detection. The goal is to present fundamental concepts and algorithms for each topic, thus providing reader with the necessary background for the application of data mining to the real problems.

Salient Features:

- Important concepts of data warehousing and data mining.
- Includes examples, solved numerical and case studies. The exercises have been provided at the end of every chapter.
- Chapters are organized into the following sections: Objectives, theory and examples, summary and solved problems.
- Summary at the end of the chapter
- Long and short answer type questions at the end of each chapter
- Tables and figures for better illustration
- Solution to numerical.

Contents:

Evolution of Decision Support Systems & Data Warehousing/From Data to Information/Data Warehouse Architecture and OLAP Servers/Defining the Business Requirements/Data Warehouse Environment/Data Warehouse Design/Data Warehouse Schema/ Case Studies/Introduction to Data Mining/Understanding Data and Data Preprocessing/Frequent Pattern Mining/Classification/ Clustering/A Brief Overview of Outlier Detection Techniques/ Introduction to Web, Temporal and Spatial Mining/Index

Audience – BE & B.Tech students.

Database Management Systems

Second Edition

t



P.S. Gill

ISBN: 978-93-81141-21-2/ Year 2011
Size 18 cm × 24 cm/Pages 310
Paperback/₹ 435.00

This book has been designed to provide an insight into the database concepts. A sincere effort has been made to present the concepts of database normalization, concurrency control, deadlock handling and recovery, etc., in a simple easy-to-understand manner. Since understanding of the query languages is vital for accessing of databases, a large number of queries have been provided to explain the equivalence between SQL, Relational Algebra, Tuple Relational Calculus and Domain Relational Calculus. The concepts of normalization have been elaborated very systematically, bringing out the necessity of normalization and fully covering the underlying concepts of functional dependencies, multi-valued dependencies, join dependencies, loss-less-join decom-position, dependency-preservation, etc. The book will enable its readers to design databases with ease and without flaws. Also, the concepts of concurrency control, deadlock handling and log-based recovery have been covered in full detail. A brief introduction has been provided to the issues related to distributed-databases, data warehousing and data mining.

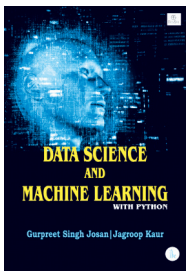
Contents:

DBMS overview/Entity-Relationship (ER) Modeling/Relational Data Model/Relational Algebra/Tuple Relational Calculus/ Domain Relational Calculus/Structured Query Language/Query Optimization Normalization of Relational Schemas/Transaction Processing Concepts/Concurrency Control/Deadlock Handling in Transaction Processing/Recovery/Distributed Database Systems/ Brief Introduction to Data Warehousing and Data Mining/Index.

Audience – Students of computer science, BCA, Management DOEACC disciplines.

Data Science and Machine Learning with Python

Forthcoming



Dr Gurpreet Singh Josan
Dr Jagroop Kaur

ISBN: 978-93-90620-80-7/Year 2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

Data science is the science of handling large amounts of fast-coming raw data, cleaning, validating, and storing it in a way so that it can be analysed in a timely manner. It is a science which helps in interpreting big data and making valuable decisions. Data science combines various tools, algorithms, machine learning principles, visualization techniques and understanding of business rules to discover hidden patterns from the raw data and helps in making better decisions for the organization. Data science includes multiple disciplines: statistics and related branches of mathematics, data mining, machine learning, analytics processes, business knowledge and high-performance scientific programming.

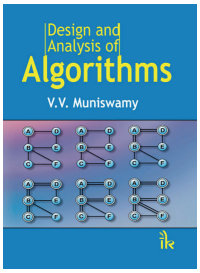
This book is intended for the first course in Data Science and Machine Learning and covers the required topics in sufficient depth to meet the requirements of the readers.

Salient Features:

- Well-organized exercises & graphical illustrations.
- Case studies of the application of Data Science and Machine Learning in various areas.
- Problems to bridge the gap between theory and practice.
- All the programs are developed using Python programming language in a lucid way.

Design and Analysis of Algorithms

t



V.V. Muniswamy

ISBN: 978-93-80026-73-2/Year 2009
Size 18 cm × 24 cm/Pages 272
Paperback/₹ 405.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

This book provides a coherent and pedagogically sound framework for learning and teaching. Its breadth of coverage insures that algorithms are carefully and comprehensively discussed with figures and tracing of algorithms. Carefully developing topics with sufficient detail, this text enables students to learn about concepts on their own, offering instructors' flexibility and allowing them to use the text as lecture reinforcement.

Salient Features:

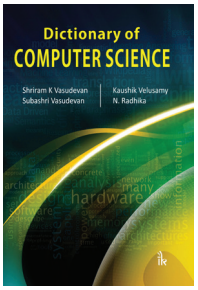
- Focuses on simple explanations of techniques that can be applied to real-world problems.
- Presents algorithms with self-explanatory pseudocode.
- Covers a broad range of algorithms in depth, yet makes their design and analysis accessible to all levels of readers.
- Includes chapter summary, self-test quiz and exercises at the end of each chapter. Key to quizzes and solutions to exercises are given in appendices.

Contents:

Introduction to Algorithms/Disjoint Sets/Divide and Conquer/ Greedy Method/Dynamic Programming/Backtracking/Branch and Bound/NP-Complete Problems/Appendices/References/Index.

Audience – PG and UG students and teachers of Computer Science.

Dictionary of Computer Science



Shriram K Vasudevan
Subashri Vasudevan
Kaushik Velusamy
N. Radhika

Forthcoming

ISBN: 978-93-84588-62-5/
Year 2024
Size 16 cm × 24 cm/Pages 306
Paperback/TBA

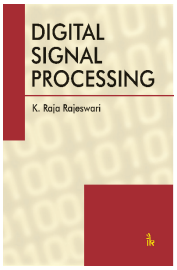
Very often we encounter words from the computing world whose precise meaning tends to elude us! More and more computer jargons are cropping up almost every other day. This dictionary is conceptualized realizing this need for access to a ready reference resource.

The authors have strived to develop this dictionary of computer terminologies in a novel way. It does not only give the pithy meaning, connotation or context, but it also includes witty cartoons and simple images and diagrams to make its usage a "learn and fun" experience.

With its exciting way of treatment of the terminologies, this dictionary will be useful to anybody who has to deal with computers in a day to day activity. This could be students of all grades, teachers, parents, professionals and so on.

Audience – Students, researchers and practicing professionals in computer science and engineering and general readers as well.

Digital Signal Processing



K. Raja Rajeswari

ISBN: 978-93-82332-91-6/Year 2015
Size 18 cm × 24 cm/Pages 312
Paperback/₹ 425.00

This book provides a comprehensive treatment of DSP techniques commencing from an elementary level of sampling process. It covers topics like z-transforms, filter approximations, digital filters (both IIR & FIR), Discrete Fourier transforms (DFTs), Fast Fourier transforms (FFTs), filter realization techniques, Multirate Signal Processing, DSP Processors, DSP applications.

At the end MATLAB programming is given on various DSP topics.

The aim is to impart adequate knowledge to the undergraduate level students in DSP area. This book focuses on theoretical concepts and problem solving.

Salient Features:

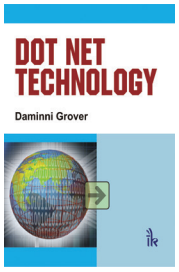
- Provides basic knowledge of the subject, implementation and applications of the DSP techniques.
- Solved examples and problems for exercise.
- Theoretical concepts with mathematical illustrations.
- Insight to practical problems.
- Orientation to practical applications.
- Knowledge about the design aspects for actual DSP systems for given specifications.
- Objective type questions with multiple-choice pattern and key also has been provided.
- MATLAB examples and problems to provide hands-on experience.

Contents:

Sampling & Discrete Time Systems/Z-Transforms/Analog Filter Approximations/IIR Filters/FIR Filters/Realization of Digital Filters/ The Discrete Fourier Transform/Fast Fourier Transform/Multirate Digital Signal Processing/Digital Correlation Techniques/Power Spectrum Estimation/DSP Processors/DSP Applications/Digital Signal Processing with MATLAB

Audience – B.E/B.Tech students of Electrical Engineering, Electronics and Communication Engineering, Computer Science and Engineering, Information Technology, Telecommunication Engineering and Biomedical Engineering.

Dot Net Technology



Daminni Grover

ISBN: 978-93-81141-34-2/Year 2011
Size 18 cm × 24 cm/Pages 376
Paperback/₹ 475.00

Dot Net Technology is meant for those who already have a basic understanding of Internet technologies and are now ready to learn to write advanced Internet enabled programs using Dot Net Technologies like ASP.Net, C#, Ado.Net, VB.Net, etc. Each technolog is presented in a straightforward fashion by discussing in detail the necessary components and briefly touching on the more advanced components.

The book differentiates itself from the other books by providing lot of practical examples. The book takes the reader through all the steps of getting, installing, configuring and using Dot Net Technologies. The more essential applications are covered in depth, and pointers are given which enable the reader to acquire more information on the subject.

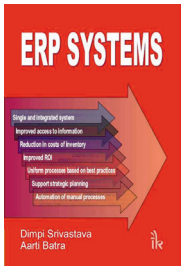
This book is based upon the undergraduate and graduate IT syllabus of various universities. Undergraduate and graduate students of IT programs and computer professionals interested in using Dot Net Technologies at work will find the book highly useful.

Contents:

Introduction to Microsoft.Net Framework/ASP.Net/Building ASP. NET websites/Building Windows and Web Forms/Introducing C# Programming/State Management using ASP.NET/ADO.NET/ VB.NET/Web Services/Website Deployment/Security Features in ASP.NET/Index

Audience – Students of Electrical and Electronics Engineering, and those appearing for GATE, UPSC.

ERP Systems



Dimpi Srivastava • Aarti Batra

ISBN: 978-93-80578-14-9/Year 2010
Size 18 cm × 24 cm/Pages 406
Paperback/₹ 425.00

ERP is an industry term used for integrated multiple-modules application software package, especially, designed to give support to specific business processes of

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

any organization. ERP systems have revolutionized the working of organizations by integrating all departments across an organization onto a single computer. There is a growing emphasis on the development and implementation of ERP systems in organizations as business requirements are fast changing due to increasing competition. For ERP to be a success ERP must be seamlessly integrated with the organizational culture of any organization. This integration will serve to meet the growing competitive requirements of the organization.

The book focuses on various aspects of ERP systems that today serve as a central backbone for an organization. The book covers the need for ERP system, its evolution, ERP market and a detailed description of various ERP modules, ERP life cycle, implementation issues, role of vendors and consultants in ERP implementation, future trends, learning and emerging issues.

Salient Features:

- In-depth study of ERP systems and its benefits.
- Describes implementation of ERP.
- Covers various modules of ERP.
- Explains ERP and related technologies such as supply chain management, customer relationship management, databases and data mining.
- Specifies critical success factors for ERP.
- Discusses management issues regarding ERP implementation.
- Compares and predicts future trends in ERP.

The key features of this book include sufficient use of diagrams and tables, "Learning Points" at the end of each subtopic and "Points to Remember" at the end of each chapter so that the concepts can be memorized easily. Exhaustive exercises at the end of each chapter are provided for the students to work out.

The book will prove useful for students of both management and technical courses of different universities. It will also serve as an excellent starting point for professionals who are involved in ERP.

Contents:

An Introduction to ERP/ERP Life Cycle/ERP Market/ERP Modules/ Framework for Evaluating ERP Acquisition/Analytical Hierarchy Process/ERP Implementation/Soft System Approach/ ERP and Related Technologies/ERP—A Manufacturing Perspective/Learning and Emerging Issues/References/Index.

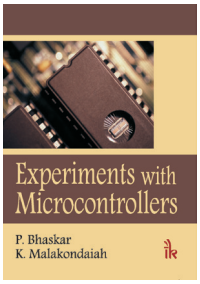
Audience – Students of both Management & Technical course and ERP professionals.

Experiments with Microcontrollers

P. Bhaskar • K. Malakondaiah

ISBN: 978-93-81141-79-3/Year 2012
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 405.00

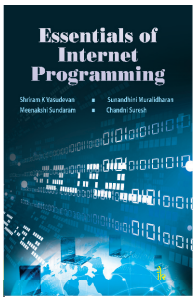
(See on page 72)



Essentials of Internet Programming

Shriram K Vasudevan
Sunandhini Muralidharan
Meenakshi Sundaram
Chandni Suresh

ISBN: 978-93-84588-59-5/Year 2015
Size 18 cm × 24 cm/Pages 345
Paperback/₹ 435.00



Essentials of Internet Programming brings together all important, fundamental and, importantly, related concepts within the confines of one book. Almost every topic has been dealt with, which will make this book a treat for anybody with relevant computer science background, who has an interest in internet programming. However, it is primarily conceptualized for students of Computer Science and Engineering. Practitioners in networking, internet space and related fields will find this a useful reference resource.

Because of the book's practical application orientation, the students and professionals will find learning an engaging and enjoyable experience. All the fundamental concepts and scripts presented in this book are according to the latest standards and implementation codes used worldwide.

Salient Features:

- "Learning objectives" at the beginning of the chapters
- Detailed introduction to each chapter, to give an idea what the reader will get to learn
- "Key points to remember," to help recapitulating and internalizing important points
- End-of-chapter quizzes and self-evaluation questions, to help apply the concepts learned
- Sample codes and corresponding results, to aid cross-checking
- Pictorial representation of important concepts for better understanding and recall

Contents:

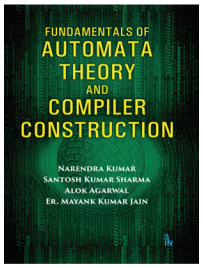
Introduction to Internet and Related Stuff/HTML 4/HTML 5 and CSS/Java Database Connectivity (JDBC)/World of Servlets/An Indepth Analysis of JSP–Server Pages/Java Script/PHP/Annexure A: Developing Servlet Application Using Eclipse/Annexure B: Developing JSP Application Using Eclipse Ground Modified for Foundation/Index

Audience – B.Tech/M.Tech students of computer science and engineering, programmers and website developers.

Fundamentals of Automata Theory and Compiler Construction

Narendra Kumar • Santosh K Sharma
Alok Agrawal • Er. Mayank Kumar Jain

ISBN: 978-93-86768-72-8/Year 2021
Size 18 cm × 24 cm/Pages 390
Paperback/₹ 445.00



This book divided in eleven chapters, in the first chapter describes basics of a compiler, its definition and its types. It also includes the need of a compiler. The second chapter deals with phases of compiler, frontend and book end of compiler, single pass and multiphase compiler; Chapter three covers role of logical analyzer, description of tokens, automata, the fourth chapter presents syntax analyzer, grammar, LMD, RMD, passing techniques. Fifth chapter gives syntax directed translation, syntax tree, attributes such as synthesis and inherited. Chapter six deals with type checking, its definition, dynamic type checking and equivalence of it, function overloading and parameter passing. Chapter seven covers run time environment storage allocation techniques, symbol table. Chapter eight presents intermediate code generators, techniques of ICG, conversion. Chapter nine deals with code generation, basic blocks, flow graph, peephole optimization while chapter ten is on code optimization, that contains optimization of basic blocks, reducible flow graph, data flow analysis and global analysis. Chapter eleven one-pass compiler, compiler, its structure, STD rules and passing are described.

Salient Features:

- Introduction of every topic in very fundamental way.
- Complete coverage of the topic in the lucid manner.
- Sufficient number of examples to illustrate the concepts broadly.
- Examples and solutions for clarifying the compiler design concepts.

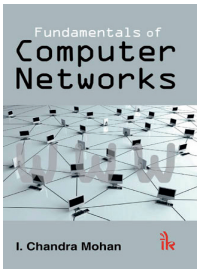
- Description of symbols used to define the concepts.
- Multiple-choice questions for competitive examinations.

Contents:

Basics of Compiler/Phases of Writing a Compiler/Lexical Analyzer/ Syntax Analyzer/Syntax Directed Translation/Type Checking/ Run Time Environment/Intermediate Code Generators/Code Generations/Code Optimization/ Pass Compiler/Index

Audience – B.E & B.Tech students.

Fundamentals of Computer Networks



I. Chandra Mohan

ISBN: 978-93-80578-50-7/Year 2011
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 395.00

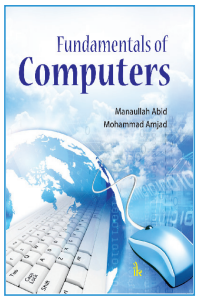
This book provides a general overview of types and categories besides presenting fundamental concepts of Computer Networks. It is true that there are plenty of books on this subject. Most of these, though contain exhaustive, extensive and authentic stuff on the subject, somehow students are often perplexed while reading them, in view of their vastness. As the author of this book rightly says, "the main intention in bringing out this book is to make available what a student specifically wants".

Contents:

Basics of Computer Networks/Signals and the Physical Layer/ The Data Link Layer/The Medium Access Sub-Layer/The Network Layer/Congestion Control Algorithms and Internetworking/The Transport Layer/The Upper Osi Layers References Question Papers Index

Audience – Students of Computer Science and Engineering.

Fundamentals of Computers



Manaullah Abid • Mohammad Amjad

ISBN: 978-93-84588-36-6/Year 2015
Size 18 cm × 24 cm/Pages 328
Paperback/₹ 435.00

The book is spread in seven units.

The first unit is dedicated to the basics of the computer system. It covers description of block diagram, functions and working of various components. The latest available types and varieties of different peripherals and CPUs are also elaborated.

The second unit describes two major operating systems, Windows and UNIX.

The third unit is about networking. The basic ideas of networking IPv4 and latest IPv6 have been described.

The fourth unit is about application packages.

The fifth unit covers logic development and programming skills. The language covered starts from basic concepts to developing large programs while putting emphasis on the fundamental concepts.

The sixth unit covers the Hypertext Markup Language programming for publishing and creating web pages.

The seventh unit deals with database management.

Contents:

Introduction to computers

Operating systems

A. Disk Operating System (DOS)/B. Windows/C. Unix: Operating System

Application programs

A. MS Word/B. MS Excel/C. MS Power Point

Introduction to computer networking

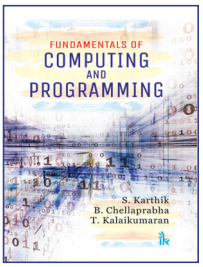
Programming in C and CPP

WEB Technologies and Web Designing with HTML

Database Management Systems/Index

Audience – B.E. /B.Tech, Computer Science and Electronics Engineering.

Fundamentals of Computing and Programming



S. Karthik • B. Chellaprabha
T. Kalaikumaran

ISBN: 978-93-85909-92-4/Year 2017
Size 18 cm × 24 cm/Pages 200
Paperback/₹ 345.00

Fundamentals of Computing and Programming provides not only theoretical knowledge but also practical aspects to make the student industry-ready. Each chapter is presented in a unique way with lot of examples, sample programs and most importantly comprehensive interview readiness questions in the last section, which will not only help revisit the concepts, but also make sure that the student can face the interviewer in this prescribed area without fear and hesitation. The book deals with topics like the fundamentals, generations, organization and architecture of computers in the beginning and then the chapter further deals with number systems, software classification, the Internet, C programming, fundamental rules and guidelines, operators, ,arrays and string operations the structures and unions and so on.

Salient Features:

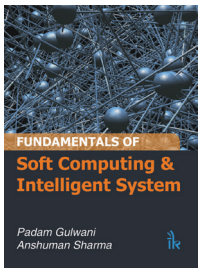
- Presents theoretical as well as practical approach for making the student industry-ready.
- The chapters are presented in a unique way with a lot of examples and sample programs.
- Deals with C programming, its introduction, fundamental rules and guidelines, process of compilation and linking, variables, naming conventions, operators, etc.
- Description of arrays and string operations quite comprehensively.
- Discusses the structures and unions with coverage also given to the preprocessor directives.

Contents:

Introduction/C Programming/Arrays and Strings/Functions: An In-depth Analysis and Understanding/Structures and Unions/ Appendix/Index

Audience – B.E./B. Tech Graduates, libraries.

Fundamentals of Soft Computing and Intelligent System



Padam Gulwani • Anshuman Sharma

ISBN: 978-93-81141-73-1/Year 2012
Size 18 cm × 24 cm/Pages 272
Paperback/₹ 345.00

The book provides the basic concepts and engineering applications of soft computing.

Soft computing is the state-of-the-art approach to artificial intelligence, and mainly comprises fuzzy logic, neural networks and probabilistic reasoning techniques. It tries to imitate human reasoning particularly in computer environment. It deals with problems like imprecision, uncertainty and learning. Soft computing systems are adaptive and intelligent in nature and we may effortlessly construct systems and

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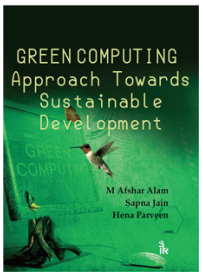
models which are simple applicable, user-friendly and fast with respect to computing. The book also focuses on fuzzy logic and neural networks and areas related to soft computing.

Contents:

Artificial Intelligence and Soft Computing/Introduction to Neural Network/Supervised Learning Technique/Unsupervised Learning/ Genetic Algorithm/Fuzzy Logic/Glossary/Index

Audience – UG & PG students of Computer Science & Engineering.

Green Computing: Approach Towards Sustainable Development



M Afshar Alam
Sapna Jain
Hena Parveen

ISBN: 978-93-86768-26-1/Year 2019
Size 16× 24 cm/Pages 212
Paperback/₹ 495.00

Green Computing: Approach Towards Sustainable Development explores seminal research in Information Communication Technology (ICT) infrastructure in the dimensions of society, economy and environment. It begins with providing smart solutions with the use of ICT for achieving sustainability in society, environment and then shifts its focus on the measures for achieving sustainable development goals for environment and discuss their impact.

In the first chapter, the ICT technologies which can be used to reduce GHG (greenhouse gas) emissions are discussed with the articles of Paris Agreement. The second chapter explains measures taken by India towards reaching the MDGs in various areas. The third chapter focuses on ICT's contribution as smart technology for environment management and protection. It provides insight of the methods to optimize the software which include algorithmic efficiency, resource allocation, virtualisation, terminal servers and their deployment in an efficient way for saving energy. The fourth chapter analyses the impact of Information Technologies and the Internet on sustainable development. It also explores different green initiatives for promoting green ICT.

Salient Features:

- Focuses on the dimensions of green informatics' contribution to reduction of energy consumption and gas emission.
- Recognizes the sustainable lifestyles and sustainable patterns of consumption and production, with developed countries with the study of Paris Agreement.
- Green ecology initiatives that focus on computing energy efficient and environment-friendly equipment.
- Programs to extend equipment's life and their recycling.
- Evaluates the implementation factors that affect sustainable development.
- Discusses the critical areas and challenging issues towards achieving green computing.
- Explains the approach used by ICT for achieving green computing.
- Explores the sustainable economic development goals with its features.
- Identifies the factors that affect sustainability and its future.
- Highlights the role of urbanisation in sustainable development.
- Provides implementation tools of sustainable developments

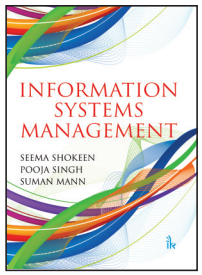
Contents:

Green Computing in Society/Green Computing and Economy/Green Computing in Ecology/Impact of ICT on Sustainable Development/ References/Index.

Audience – B.E., BTech and Environment Engineering.

Shelving – Computer Science, Environmental Science/Studies

Information Systems Management



Seema Shokeen
Pooja Singh
Suman Mann

ISBN: 978-93-84588-82-3/Year 2018
Size 18 cm × 24 cm/Pages 360
Paperback/₹ 395.00

This book majorly focuses on the management of the information systems and also analyses the relationship among the people, information, information systems and the business houses. The key elements of the book comprises the roles, risks, challenges and the impact of information systems on the decision-making process of the managers. It also discusses the contemporary applications of the information systems, enterprise planning, customer relationship management, supply chain management and other related topics. It also deals with the interpersonal relationship of customers, managers, partners and suppliers. It discusses the extensive use of knowledge management system for the efficient management of the organizational resources.

Salient Features:

- Role of information in organizations with a wider understanding of information systems as an integral component of business management.
- Information systems (IS) in modern businesses, their roles in supporting operations, managerial functions and competitive needs, challenges from the proliferation of IS and the strategic prospects.
- Technical issues related to IS infrastructure, hardware, software, and organization of data resources with an emphasis on managerial issues related to the development, effective deployment, management and strategic business uses of IS resources.
- Management skills to analyze and design information systems, and the impact of technology on organizations.

Contents:

UNIT-I - Introduction: Introduction

UNIT-II – System Development: System Development/System Development Life Cycle and Models/System Analysis and Design/ System Design

UNIT-III – Information Concepts: Data and Information

UNIT-IV – Information Technology: Information Technology/ Decision of Appropriate Information Technology for Management Information System

UNIT-V - Information Systems and Computer Networks: Choice of Appropriate IT Systems in Management Information System Information System/Information System/Computer Network and Internet

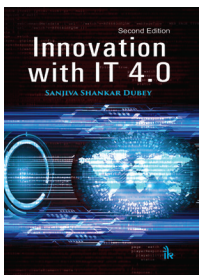
UNIT-VI – Introduction to Database Systems: Introduction to Database Management System/Entity Relationship Model/Relational Data Model/Querying Databases using SQL Commands

APPENDIX

Audience – Students of BBA, B. Com (H), BBA (B&I) and, B. Tech (CS/ IT) courses of GGSIPU and BBS course from Delhi University

Shelving – Computer Science

Innovation with IT 4.0



Sanjiva Shankar Dubey

ISBN: 978-93-86768-77-3/Year 2020
Size 16 cm × 24 cm/Pages 264
Paperback/₹ 395.00

In today's knowledge-driven economy, IT is the buzzword for innovation in business. Given its pervasive impact on fast-changing business landscape, IT has evolved from

being an 'enabling tool' to being the 'prime mover' of most businesses. Hence, tapping its limitless potential should be a key business initiative of savvy managers for transforming and accelerating the growth of their enterprises.

Innovation with IT is a distilled account of the author's first-hand experience of business innovation with IT. It insightfully shows how to:

- capitalize on IT tools to innovate business models, strategies and processes;
- reinvent functions and business of IT industry for driving business innovation; and
- manage the process of innovation and the people behind it

This easy-to-read book simplifies complex concepts and processes using diagrams, tables, and fascinating stories drawn from the author's real-life interactions with industry leaders, customers, and colleagues. It helps managers at all levels in creating and implementing an innovative blueprint for their businesses.

Salient Features:

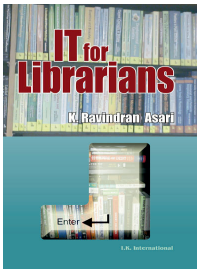
- Examines the role of IT in innovating business strategies, processes and models.
- Addresses unique challenges, possibilities and means of innovating IT functions and IT businesses.
- Discusses how to conceive and implement innovative ideas and invigorate a creative workforce.

Contents:

Why Innovate? New Paradigm of Business Innovation/IT@Te Business and IT Alignment: Five Innovation Perspectives/Business Strategy Innovation with IT/Business Model Innovation with IT/Business Process Innovation with IT/Innovation of IT Function: Reinventing CIO/ Innovation with IT Business/Managing Ideas: Ide@te/Invigorate before IT@Te/To Sun It All: Innovation with IT/Bibliography/Index..

Audience – MBA students.

IT for Librarians



K. Ravindran Asari

ISBN: 978-93-80026-59-6/Year 2009
Size 18 cm × 24 cm/Pages 336
Hardback/₹ 445.00
ISBN: 978-93-80026-07-7
Paperback/₹ 375.00

This book provides a comprehensive account of Information Technology (IT) applications in libraries. It will enable the students of Library and Information Science to understand the IT options appropriate for modern libraries and they will be able to manage libraries and provide services efficiently by adopting suitable IT tools and techniques. Library and Information Science syllabi of many universities in India have been taken care of while deciding the content of this book.

Spread in 10 chapters, the book discusses:

Overview of IT/Computer hardware and software/Application programs like MS Word, Power Point and MS Excel/Library automation and library automation software/Overview of the existing communication systems and networks/Internet search techniques/ Important database management systems/Online information systems/Keyboard shortcuts

Contents:

Information Technology: Scope and Development/Computer Hardware/Software/Programming and Programming Languages/ Software for Library Applications/Library Automation/ Telecommunication Systems and Networks/The Internet/Database and Database Management Systems/Online Information Retrieval/ Appendices/Index

Audience – Degree & Distance Course in Library Science

IT Infrastructure and Management



Surendra Keshari • Narendra Kumar

ISBN: 978-93-81141-99-1/Year 2012
Size 16 cm × 24 cm/Pages 286
Paperback/₹ 355.00

This book is designed for undergraduate and postgraduate students of IT Infrastructure & its Management. Business enterprises face numerous challenges in managing their IT infrastructure. To handle these challenges, IT Infrastructure Management offers focused and efficient solutions. Business organizations can achieve cost-effective and quick time to delivery by using proven delivery models, mature techniques, standardized tools and robust process offered by IT Infrastructure Management. IT Infrastructure Management ensures high reliability, round-the-clock availability of services, efficient management and optimum scalability.

IT infrastructure service delivery helps in achieving proactive and cost-effective solutions and fast return on IT infrastructure investments.

This book emphasizes the following:

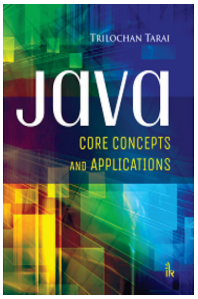
- IT Infrastructure and ITIL
- Service Delivery Process
- Service Support Process
- Storage Management
- Security Management
- IT Ethics

Contents:

Introduction/IT Infrastructure/Service Delivery Process/Service Support Process/Storage Management/Security Management/ IT Ethics/Emerging Trends in IT/Glossary/Index.

Audience – B.E. & B. Tech. computer science & IT students.

JAVA: Core Concepts and Applications



Trilochan Tarai

ISBN: 978-93-84588-83-0/Year 2015
Size 18 cm × 24 cm/Pages 408
Paperback/₹ 505.00

Developing application software plays a crucial role in an enterprise and thus knowledge of programming language has become more essential. This book offers a comprehensive study package of the core concepts of Java Programming, with real-world examples from the industry, varieties of concepts like Marker Interface, Serialization, Externalization, Multithreading, Collection Framework etc., making it well-suited for OCJP/SCJP programs. Special coverage of utilities as (a) Internet programming concepts, (b) benefits of executing Java programs, (c) advantages of updating new features, (d) ways of increased user performance, (e) security features and enhancements, and (f) improved developer productivity.

With its coverage and design, it will serve as a textbook for beginners for students of BE and B. Tech in Computer Science & Engineering and Information Technology, and Diploma in Computer Science. It will also be a good reference for BCA, MCA, BSc and MSc in Computer Science and Information Technology, DOEACC courses and for Java software professionals.

Salient Features

- Annotation: A new feature in Java programming provided by JDK5.0 version. It can be used to describe metadata (data about data) in Java programming.
- Collection Framework: All collection frameworks contain the interfaces, implementations and algorithms.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

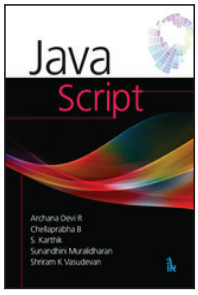
- Enhanced for loop: Introduced in Java5. The advantage of For-each loop is that it eliminates the possibility of bugs and makes the code more readable.
- Serialization & De-Serialization
- Externalization
- Debugging Exercises: In every chapter debugging exercise has been given.

Contents:

Object Oriented Programming (OOP)/Java/First step towards Java Programming/Operators/Control Structures/Array/String/Class/Inheritance/Interface/Package/Exception Handling/Multithreading/Collection Framework/Networking in Java/Introduction to Graphics Programming/Applet/J2SE New Features/Design Pattern in Java/JDBC/The OCPJP FAQ & Answers/Index

Audience – B.Tech/ M.Tech in Computer Science, programmers, web developers, and software developers.

Java Script



Prof. (Ms.) Archana Devi R
Dr. Chellaprabha. B
Dr. S. Karthik
Ms. Sunandhini Muralidharan
Dr. Shriram K Vasudevan

ISBN: 978-93-86768-64-3/Year 2019
Size 18 cm × 24 cm/Pages 228
Paperback/₹ 495.00

JavaScript instruct the user how to create exciting web pages that employ the power of JavaScript to provide functionality. JavaScript allows dynamic content to get executed in a webpage. It does not incorporate any HTML tags or rules. JavaScript is not a stand-alone language, but rather it is a scripting add-on to HTML. JavaScript is one of the basics of web designing technology which any web developer should be having a thorough knowledge and understanding. This book focuses on aiding the reader to incorporate all features of JavaScript to create an interactive web page. The book not only serves the academic learning, but also shall be reference guide of practitioners.

Salient Features:

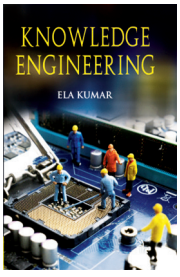
- A comprehensive guide shows developers how to build dynamic, cross-browser Web sites and applications using JavaScript.
- JavaScript in easy steps has an easy-to-follow style that will appeal to anyone who wants to add functionality to their web pages.
- The book will appeal to programmers who want to quickly add JavaScript to their skills set and to the student who is studying website design at school or college and to those seeking a career in web development who need an understanding of client-side scripting.

Contents:

Introduction/JavaScript Programs/Dialog Boxes/Objects in JavaScript/Browser BOM/DOM HTML/JavaScript and HTML forms/JavaScript Regular Expression/Errors and Exception Handling.

Audience – Reference guide to practitioners.

Knowledge Engineering



Ela Kumar

ISBN: 978-93-85909-27-6/Year 2018
Size: 18 cm × 24 cm/Pages: 260
Paperback/₹ 495.00

The universe is full of different kinds of knowledge like tangible, intangible, conceptual, static, dynamic and many more. Knowledge Engineering is an advancement of Artificial Intelligence (AI). The present book describes various concepts of artificial intelligence, and other technical aspects of Knowledge Engineering and Computer Science. Knowledge representation is a key aspect of problem formulation from AI viewpoint. In the light of importance of knowledge representation and its analysis, it has emerged as a full-fledged engineering discipline. The book focuses on the concepts and issues of Knowledge Engineering that have impact on business management strategies, productivity, and the key elements of any business and its people. It also discusses the skills required from the persons working in this area.

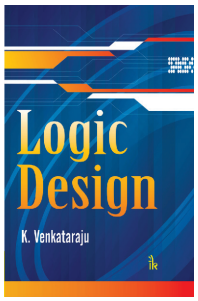
Salient Features:

- Basics of the area of knowledge, its significance, applications, basics of engineering, manpower requirement for handling knowledge, roles and responsibilities of knowledge engineer.
- Technical and non-technical methods for acquisition of knowledge.
- Inferencing, a technique for knowledge manipulation.
- Practical aspects of knowledge based system design and management.

Contents:

Introduction/Concept of Knowledge/Knowledge Acquisition/Knowledge Representation/Knowledge Manipulation/Knowledge Management/Knowledge Based system Design/Index

Logic Design



K.Venkataraju

ISBN: 978-93-84588-30-4/Year 2015
Size 18 cm × 24 cm/Pages 352
Paperback/₹ 425.00

Logic Design gives an insight into the analysis and design of combinational and sequential logic systems and explains the concepts of logic circuit design in a lucid manner. It will help the reader build a strong foundation for applying the principles and concepts in real-world digital system design. It contains lot of illustrative examples for easy understanding of the concepts. The book is useful as a text book as well as a reference material for engineering undergraduate students, practising engineers and consultants.

Salient Features:

- Comprehensive coverage of Combinational and Sequential logic circuit design principles and applications.
- Extensive use of truth tables, Karnaugh maps, Quine-McCluskey minimization technique, and map entered variable techniques to simplify Boolean functions.
- Appropriate discussion using concepts of gates, decoders, encoders, adders, subtractors, binary comparators, latches, flip-flops, binary ripple counters, synchronous counters, shift registers, state diagrams and so on.
- Detailed discussion of Mealey and Moore Models using block diagrams
- About 170 solved examples demonstrated in a step-by-step manner, and more than 100 practice exercise problems at the end of the chapters

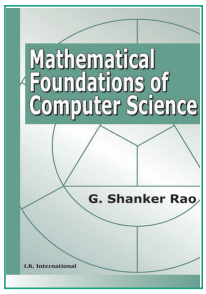
Contents:

Principles of Combinational Logic-1/Principles of Combinational Logic-2/Analysis and Design of Combinational Logic-1/Analysis and Design of Combinational Logic-2/Sequential Circuits-1/Sequential Circuits-2/Sequential Design-1/Sequential Design-2

Audience – UG and PG students of Computer Science & Engineering, and Electronics & Communication Engineering.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Mathematical Foundations of Computer Science



G. Shanker Rao

ISBN: 978-81-88237-49-4/Year 2006
Size 16 cm × 24 cm/Pages 472
Paperback/₹ 445.00

Salient Features:

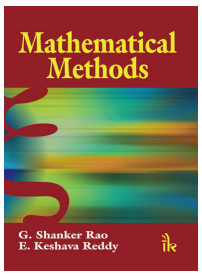
- Comprehensive discussions on logic, functions, algebraic systems, recurrence relations and graph theory.
- Wide variety of exercises at all levels.
- Several worked out examples.

Contents:

Mathematical Logic/Predicate Logic/Set Theory/Algebraic Structures/Elementary Combinatorics/Recurrence Relations/Graph Theory/Application of Graph Theory/Bibliography.

Audience – B.Tech. and M.C.A. students.

Mathematical Methods



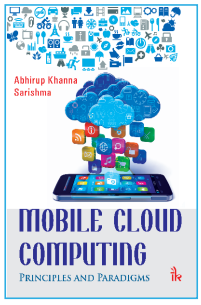
G. Shanker Rao • E. Keshava Reddy

ISBN: 978-93-80026-74-9/Year 2009
Size 16 cm × 24 cm/Pages 688
Paperback/₹ 445.00

(See on page 132)

Mobile Cloud Computing

Principles and Paradigms



Abhirup Khanna • Sarishma

ISBN: 978-93-84588-91-5/Year 2016
Size 18 cm × 24 cm/Pages 232
Paperback/₹ 485.00

The amalgamation of two technologies, Cloud Computing and Mobile Computing, has given rise to what we know today as Mobile Cloud Computing (MCC). Mobile Cloud Computing could be seen as a solution to the problems faced by our smartphones by leveraging the concepts of cloud computing. With the vast usage of mobile devices, it is evident that the next paradigm shift after cloud computing would be MCC.

This book covers all aspects of MCC. Some of the leading concepts which this book covers are Mobile Computational Offloading (MCO) and Cloud-assisted Mobile Augmentation (CMA) which helps to overcome the limitations (battery life and computational power) faced by our smartphones. The book lays emphasis on the concept of Cloudlets with which a reader could create his/her own local cloud with the help of his/her mobile device. The book also talks about Live VM migration through which VMs of mobile devices could be migrated from one server to another without causing any glitches in its services.

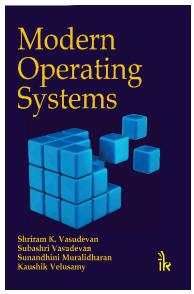
The book allows a reader to have a deep understanding of MCC and explore its contents according to his/her own endeavors. It serves the purpose of providing adequate information about the fundamentals of MCC to a common reader. It will also help research scholars in future research within the scope of this technology.

Contents:

Introduction to Mobile Cloud Computing/Cloud Assisted Mobile Augmentation/Mobile Computation Offloading/Cloudlet: Bringing Cloud Closer/Resource Allocation in Mobile Cloud Computing/Live Migration of Virtual Machine/Security concerns in Mobile Cloud Computing

Audience – Students of B.Tech/M.Tech in Computer Science, MBA (IT), BSc (IT) MCA, BCA, and Mobile and Cloud Computing Researchers and Professional.

Modern Operating Systems



Shriram K Vasudevan
Subashri Vasudevan
Sunandhini Muralidharan
Kaushik Velusamy

ISBN: 978-93-84588-14-4/Year 2015
Size 16 cm × 24 cm/Pages 232
Paperback/₹ 345.00

An operating system is a system software which manages computer hardware and interacts with the users. This book deals with all the major concepts of Operating Systems with relevant practical explanations. It will be easier for even a non-computer science student to understand the concepts.

This book is written for the introductory course on operating system at the junior and the senior undergraduate level or at the first year graduate level.

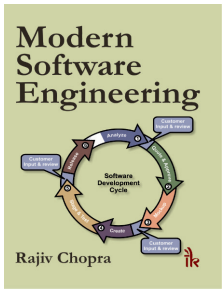
The fundamental concepts and algorithms covered in the book are often based on those used in the existing commercial operating systems. The aim is to present these concepts and algorithms in a general setting that is not tied to one particular operating system, and present it in the simplest and easiest way to the readers. With a lot of examples that pertain to the most popular operating systems, it also includes Linux (Ubuntu 12.10 Quantal Quetzal and windows 8.1 machines).

Contents:

Introduction to operating systems/Process and inter-process communication/Deadlock and analysis/Memory management/Files and related information/Security–an indepth investigation/Mass storage structure/Appendix I: Shell programming–An introductory discussion/Appendix II: Basic linux/Unix commands/Index

Audience – B.E. & B.Tech. Students.

Modern Software Engineering



Rajiv Chopra

ISBN: 978-93-82332-71-8/Year 2014
Size: 18 cm × 24 cm/Pages 640
Paperback/₹ 625.00

Modern Software Engineering weaves in some crucial, engaging and challenging aspects. These aspects are of interest to the software developer who is at the helm of many vital developments being made in the arena of software engineering. It is the art of software engineering that matters.

Due to exponential rise in the number of the Internet users, the present-day web applications, their deployment, functionality and complexity have also multiplied. The contents of this book have interwoven their designs. The book is bolstered with many examples, case studies and has the following salient features:

- MCQs at the end of each chapter.
- Conceptual short questions with answers.
- Important points are highlighted.
- Laboratory experiments.
- Projects.
- Latest question papers.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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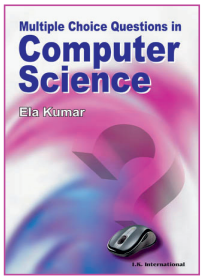
Last but not the least the book will address the intellectual curiosity of a software engineer who now wants to comprehend a practical knowledge.

Contents:

System analysis/Software metrics/Software estimations/Software process models/Requirements analysis/Structured analysis/Software design/Coding/construction/Software testing-I/Software testing-II/Debugging/SCM/SQA/Object oriented analysis (OOA)/GUI design/Web engineering.

Audience – B.E. and B.Tech students.

Multiple Choice Questions in Computer Science



Ela Kumar

ISBN: 978-81-90675-77-2/Year 2008
Size 16 cm × 24 cm/Pages 366
Paperback/₹ 445.00

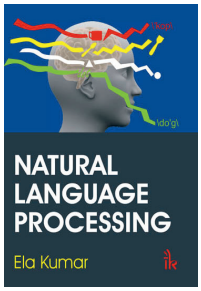
The present book aims to provide a thorough account of the type of questions asked in various competitive examinations conducted by UPSC, public sector organizations, private sector companies etc. and also GATE.

Contents:

Computer Fundamentals/Digital Electronics and Microprocessor/C-Programming/Data Structure and Algorithms/Computer Organization/Parallel Processing/Theory of Computation/Operating System/Computer Graphics and Multimedia/Database Management System/Object Oriented Programming/Computer Networks/Artificial Intelligence and Neural Networks/Internet Technology/Software Engineering/Data Communication/Information Technology.

Audience – Competitive examinations.

Natural Language Processing



Ela Kumar

ISBN: 978-93-80578-77-4/Year 2011
Size 18 cm × 24 cm/Pages 220
Paperback/₹ 345.00

Natural Language Processing covers all the aspects of the area of linguistic analysis and the computational systems that have been developed to perform the language analysis. The book is primarily meant for post graduate and undergraduate technical courses and will be useful for the B.Tech. and M.Tech. students.

The book broadly deals with:

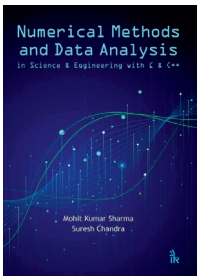
- The basic area of natural language processing, its significance and applications, its history, role of knowledge in language processing, practical language processing systems.
- Various techniques of performing the syntactic analysis; phonological analysis, morphological analysis, word level analysis and other related topics; the concept of ambiguity and techniques to resolve the ambiguities in language processing.
- Techniques used for understanding the meaning of the sentence. The grammatical formalisms that are developed to accommodate the word meaning and collective sentence meaning.
- Elementary and advanced parsing techniques. The augmented and feature grammars. The advanced grammar formalisms used for capturing meaning of the sentence.
- Use of knowledge in language processing. The knowledge representation techniques. First order predicate calculus and different inference mechanisms that are used to draw conclusions from the sentences.
- Concept of anaphora, pragmatic and discourse understanding theories.

Contents:

Introduction/English fundamentals/Syntactic Analysis/Transition Networks and Grammars/Advanced Parsing Techniques/Semantic Analysis Knowledge Representation/Pragmatic and Discourse Analysis/Natural Language Generation/Index.

Audience – B.Tech. and M.Tech. students.

Numerical Methods and Data Analysis in Science & Engineering with C & C++

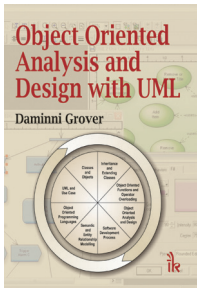


Mohit Kumar Sharma
Suresh Chandra

ISBN: 978-93-86768-51-3/Year 2019
Size: 18 × 24 cm/Pages 416
Paperback/₹ 395.00

(See on page 155)

Object Oriented Analysis and Design with UML



Daminni Grover

ISBN: 978-93-81141-56-4/Year 2012
Size 18 cm × 24 cm/Pages 426
Paperback/₹ 465.00

The book covers the conceptual underpinnings of object orientation. This book provides practical guidance on the analysis and design of object oriented systems and the concepts presented are based on a solid theoretical foundation.

It deals primarily with a method of software development. Hence, appropriate for courses in software engineering and as a supplement to courses involving specific object oriented programming languages. This book introduces several tools for analysis and design including: Use case narratives and diagrams, class diagrams, sequence and collaboration diagrams, state and activity diagrams and design pattern principles. It also covers fundamental object oriented concepts such as polymorphism, inheritance, encapsulation and interfaces.

The audience of this book can be divided into a number of segments. The first segment is the undergraduate and graduate students of IT programs. The second is for the industry people like programmers, IS business analysts and IS managers so that they can effectively use object oriented technology to solve their problems.

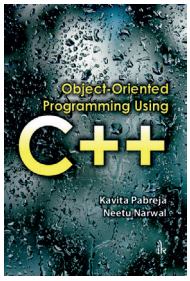
Contents:

Object Orientation – Basic Principles/Overview of C++/Classes and Objects/Inheritance and Extending Classes/Operator Overloading/Object Oriented Analysis/Object Oriented Design/Software Development Process/Sementic and Entity Relationship Modelling/Existing Methodologies and Development Process/Object Oriented Functions/Object Oriented Programming Languages/UML and Use Case Driven Approach/The UML within a Development Process/Use Case and Conceptual Modelling/Glossary/OOPS Summary/Index

Audience – Students of Computer Science, Electrical and Electronics Engineering.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Object-Oriented Programming Using C++



Kavita Pabreja
Neetu Narwal

ISBN: 978-93-86768-27-8/Year 2019
Size 18 cm× 24 cm/Pages 512
Paperback/₹ 645.00

This book offers a complete background in the basics of object-oriented programming using C++. It elaborates the step-by-step progression from C to C++. The text includes fundamental concepts like Programming paradigms and C++ environment, Classes and Objects, Inheritance, Operator Overloading, Runtime Polymorphism, Pointers, Constructors, Destructors, as well as advanced concepts like Generic programming using Templates, Namespace, Exception Handling, File Handling and Standard Template Library. The content is detailed and student-friendly to suit the requirements of Computer Science students at undergraduate and postgraduate levels.

Salient Features:

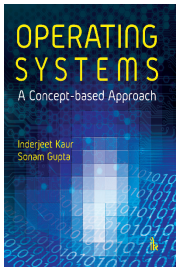
- Concepts covered in each chapter are written at its beginning.
- Contains more than 150 solved programs, programming exercises and questions for practise.
- Each solved program is explained thoroughly with output.
- Well structured text with support of diagrams.
- A comprehensive index at the end of the book to have a quick look at the topics of interest.

Contents:

Different Programming Paradigms and C++ Environment/Moving from C to C++/Functions/Classes and Objects–I/Classes and Objects-II/Pointers and Dynamic Memory Allocation/Constructors and Destructors/Inheritance/Polymorphism/Operator Overloading/ Parametric Polymorphism: The Generic Programming/Namespace/ Exception Handling/Managing Input and Output/File Handling/ Standard Template Library/Bibliography/Index.

Audience – Undergraduate and postgraduate students of Computer Science.

Operating Systems A Concept-based Approach



Inderjeet Kaur • Sonam Gupta

ISBN: 978-93-84588-78-6/Year 2016
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 405.00

The book describes the development of modern operating systems, explaining the evolution starting from the mainframe systems. This book deals with the subject matter in a novel, all-round manner. Since operating system is considered to be a concept-rich subject, this book discusses each concept in depth and explains the same in a lucid manner. The book also covers the practical aspects of the subject, emphasizing shell programming. It also covers all the major programs discussed in lab sessions for the students. The different features of various operating systems are also explained. Linux, Windows XP and Symbian Mobile operating systems are emphasized in the case studies.

This book has been designed after reviewing the syllabi of various Indian universities and, therefore, provides a wide coverage of the subject. Each chapter begins with learning objectives and ends with a summary containing a quick review of important concepts discussed in the chapter. Every chapter also provides a plenty of solved examples along with the conceptual material in the text for a hands-on understanding of the methods involved. Multiple-choice questions, review questions and brain teasers provided at the end of each chapter will assist the faculty in preparing the students for the examinations.

With its coverage and approach, this book will be extremely useful for undergraduate and postgraduate students of Computer Science, IT Engineering and MCA.

Salient Features:

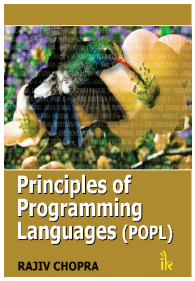
- Discusses different types of OSs and OS architectures and also explains how the modern operating systems have been developed.
- Highlights the hardware issues necessary to understand operating systems concepts.
- Covers every concept in depth and provides numerous solved examples interspersed within the text.
- Provides specially designed brain teasers at the end of each chapter for the students to develop an analytical approach to problem solving.
- Includes case studies of OSs, namely, Linux, Windows and Symbian Mobile OS.
- Contains hands-on session for programs that will be helpful for operating system laboratories.

Contents:

Introduction/Processes/CPU Scheduling/Synchronization/Dead-lock/Memory Management/Virtual Memory/I/O System/File Management/Disk Storage/Protection & Security/**Appendix 1** Case Study of Linux and Windows XP OS/**Appendix 2** Case Study of Mobile OS/**Appendix 3** Set of Implemented Programs in C/C++/ **Appendix 4** Model Question Papers/Index

Audience – B. Tech students of computer science and engineering.

Principles of Programming Languages (POPL)



Rajiv Chopra

ISBN: 978-93-84588-01-4/Year 2014
Size 18 cm × 24 cm/Pages 224
Paperback/₹ 415.00

The foremost and the primary aim of the book is to meet the requirement of the students who wish to understand the basic principles of programming languages. T his is very important for the new engineer who wants to enter the field of programming. This book is self-comprehensive enough with a step-by-step approach to programming. Some salient features of the book are:

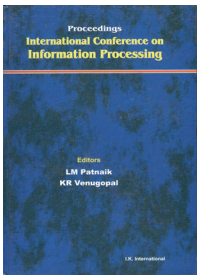
- Best methodology adopted to teach basic principles of programming.
- Designed to meet the needs of both infant programmers as well as budding engineers who wish to be a good software developer.
- The flow charts, algorithms and hence programs approach followed in this book is vital.
- Several programming examples from FORTRAN-77 are given.

Contents:

Computer preliminaries/Introduction to DOS/Fortran fundamentals/ Numerical input/output/Transfer of control/Looping/Arrays/ Function and subroutines/Files and file handling/Index

Audience – B.E. & B.Tech Students.

Proceedings of International Conference on Information Processing



Editors

L.M. Patnaik • K.R. Venugopal

ISBN: 978-81-89866-51-8/Year 2007
Size 16 cm × 24 cm/Pages 644
Hardback/₹ 1250.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

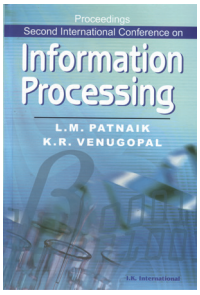
The proceedings features several key-note addresses in the areas of advanced information processing tools. This area has been recognized to be one of the key five technologies poised to shape the modern society in the next decade. It aptly focuses on the tools and techniques for the development of Information Systems. Emphasis is on pattern recognition and image processing, software engineering, mobile ad hoc networks, security aspects in computer networks, signal processing and hardware synthesis, optimization techniques, data mining and information processing.

Contents:

Session 1: Pattern Recognition and Image Processing/Session 2: Software Engineering/Session 3: Networks and Security/Session 4: Signal Processing and Hardware Synthesis/Session 5: Data Mining and Information Retrieval/Session 6: distributed Systems/Session 7: Optimization Techniques.

Audience – Students of MCA/M.Sc (CS)/M.Sc.(IT)/MCM and research students.

Proceedings of the Second International Conference on Information Processing



L.M. Patnaik • K.R. Venugopal

ISBN: 978-81-906942-4-7/Year 2008
Size 16 cm × 24 cm/Pages 700
Hardback/₹ 1995.00

The Proceedings features several key-note addresses in the areas of advanced information processing tools. This area has been recognized to be one of the key five technologies poised to shape the modern society in the next decade. It aptly focuses on the tools and techniques for the development of Information Systems. Emphasis is on pattern recognition and image processing, software engineering, mobile ad hoc networks, security aspects in computer networks, signal processing and hardware synthesis, optimization techniques, data mining and information processing.

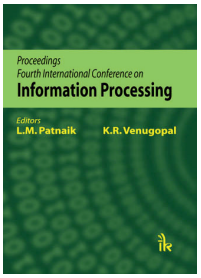
The present treatise spread in 79 contributions from covers the following topics:

Data Mining and Information Retrieval/Information Processing and Pattern Recognition/Software Engineering/Web Services/Networks and Optimization/Algorithms/Soft Computing/Bio and Medical Informatics

Audience – MCA/M.Sc. (CS)/M.Sc.(IT)/MCM students and research students.

Proceedings of the Fourth International Conference on Information Processing

Editors



L.M. Patnaik • K.R. Venugopal

ISBN: 978-93-80578-46-0/Year 2010
Size 16 cm × 24 cm/Pages 548
Hardback/₹ 1995.00

The present treatise spread in 67 contributions from the experts deals with the following topics:

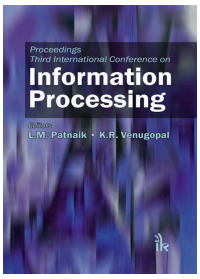
Information Processing and Pattern Recognition/Computer Communication Networks/Hardware and Optimization/Data Mining/Software Engineering/Distributed Systems/Biomedical Informatics/Soft Computing

Contents:

Data Mining/Image Processing and Pattern Recognition/Software Engineering/Computer Communication Networks/Networks System/Wireless Sensor Networks/Distribution Systems/Bio-Medical Informatics/Soft Computing/Poster Papers/Index.

Audience – Students of MCA/M.Sc. (CS)/M.Sc. (IT)/MCM and research students.

Proceedings of the Third International Conference on Information Processing



L.M. Patnaik
K.R. Venugopal

ISBN: 978-93-80026-72-5/Year 2009
Size 16 cm × 24 cm/Pages 772
Hardback/₹ 1995.00

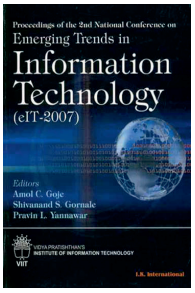
The present treatise spread in 103 contributions from the experts covers the following topics:

Information Processing and Pattern Recognitino/Computer Communication Networks/Hardware and Optimization/Data Mining/Software Engineering/Distributed Systems/Biomedical Informatics/Soft Computing

Audience – Students of MCA/M.Sc. (CS)/M.Sc.(IT)/MCM and research students.

Proceedings of the 2nd National Conference on Emerging Trends in Information Technology (eIT-2007)

Editors



Amol C. Goje
Shivanand S. Gornale
Pravin L. Yannawar

ISBN: 978-81-89866-63-1/Year 2007
Size 18 cm × 24 cm/Pages 368
Paperback/₹ 515.00

Information Technology skill standards provide a common language for industry and education. It provides increased portability depending on attitude and performance of the professionals. The industry recognizes IT education programs that build competency among the students to perform the best in the new emerging trends in Information Technology, like Human Computer Interactions, Biometrics, Bioinformatics, Signal Processing. So this conference is organized to bring together leading academicians, industry experts and researchers in the area of emerging trends in Information Technology and facilitate personal interaction and discussions on various aspects of Information Technology. It also aims to provide a platform for the post-graduate students and research students to express their views about the emerging trends in Information Technology with interaction and exchange of ideas among the researchers and students from allover India. With this focus Technical/research papers are invited from the students of MCA/M.Sc. (CS)/M.Sc.(IT)/MCM and research students on the following topics:

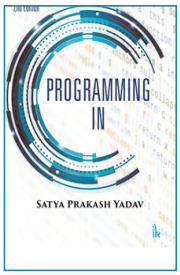
Biometrics/Data Communication and Security/Digital Image and Image Processing/Human Computer Interaction/Internet Technologies and Service Oriented Architecture/Artificial Intelligence and Its Applications

Audience – Students of MCA/M.Sc. (CS)/M.Sc.(IT)/MCM and research students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Programming in C

Second Edition



Satya Prakash Yadav

ISBN: 978-93-86768-86-5/Year 2020
Size: 18 × 24 cm/Pages 520
Paperback/₹ 595.00

This book will help students to learn C programming language, and at the same time, it will allow the students to learn how to build one's own programming language, a minimal LISP in fewer than 1000 lines of code. The concepts of the C programming language are used in almost all engineering disciplines and, therefore, this textbook is essential for all students to grasp the basics of the language. This will be an indispensable textbook not only for the students of Computer Science, but will also be useful to students in other engineering disciplines.

Salient Features:

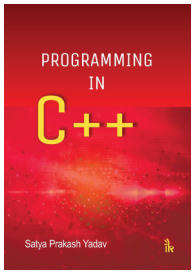
- Provides all the important standard and precise definitions
- Contains numerous solved examples to help students to grasp the basics
- Provides hints and explanations for every problem for better understanding
- Helps build one's own minimal LISP in fewer than 1000 lines of code
- Familiarizes the students with imperative programming as another way of implementing programs
- Reinforces the principle of abstraction to encourage students to look for more abstract solutions

Contents:

Basics of Computer/Number System/Basics of Programming/Character Set, Token, Operators and Expression/Control Flow Statements/Functions and Their Uses/Array/Pointers and Their Uses/Structure and Union/File Management/Multiple-Choice Questions/Subjective Questions and Their Solutions/Index

Audience – BE/BTech in Computer Science, all other BE/BTech/BCA/MCA/AMIE/AMIETE students, and budding programmers

Programming in C++



Satya Prakash Yadav

ISBN: 978-93-86768-06-3/Year 2017
Size 18 cm x 24 cm/Pages 784
Paperback/₹ 725.00

This book will help students to learn C++ programming language, and at the same time it will allow the students to learn how to build one's own programming language, a minimal LISP in fewer than 1000 lines of code. The concepts of the C++ programming language are used in almost all engineering disciplines along with all boards of higher secondary class (10+2). Therefore, this textbook is essential for all students to grasp the basics of the language. This will be an indispensable book not only for the students of Computer Science, but will also be useful to students in other engineering disciplines. The author of this book hopes that readers will learn everything what they need to know about C++ language and write C++ programs from this book.

Salient Features:

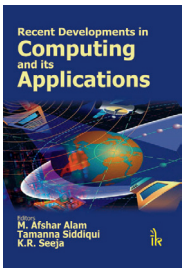
- Provides all the important standard and precise definitions.
- Contains numerous examples to help students to grasp the basics.
- Provides hints and explanations for every problem for better understanding.
- Helps build one's own minimal LISPS in fewer than 1000 lines of code.
- Familiarizes the students with imperative programming as another way of implementing programs.
- Reinforces the principle of abstraction to encourage students to look for more abstract solutions.

Contents:

Intoduction to basic object oriented concepts/Languages and translators/Token and operators/Control statements/Functions/Array and string array fundamentals/Structure and union/Class and objects/Constructor and destructor/Operator overloading/Inheritance/Exception handling/Template and STL/Streams and files

Audience – BE/ B.Tech. in Computer Science, all other BE/B.Tech./BCA/MCA/AMIE/AMIETE/POLYTECHNIC/10+2 CLASS students, and budding programmers

Recent Developments in Computing and its Applications



M. Afshar Alam • Tamanna Siddiqui
K.R. Seeja

ISBN: 978-93-80026-78-7/Year 2009
Size 18 cm × 24 cm/Pages 616
Hardback/₹ 1595.00

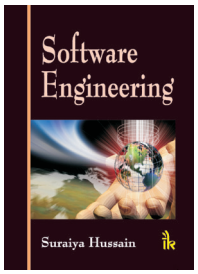
This book comprises of 74 contributions from the experts covering the following topics.

Contents:

Information Communication Technologies/Network Technologies/Wireless and Sensor Networks/Soft Computing/Circuits and Systems/Software Engineering/Data Mining/Bioinformatics/Data and Network Security.

Audience – Professionals of Computer Science.

Software Engineering



Suraiya Hussain

ISBN: 978-93-81141-74-8/Year 2012
Size 18 cm × 24 cm/Pages 200
Paperback/₹ 325.00

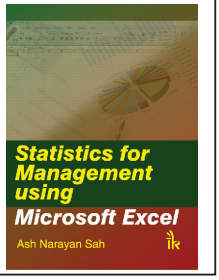
Software Engineering (SE) is a profession dedicated to designing, implementing, and modifying software so that it is of high quality, affordable, maintainable, and fast to build. It is a "systematic approach to the analysis, design, assessment, implementation, test, maintenance and reengineering of software, that is, application of engineering to software". The main focus of this book is to thoroughly understand the basic concepts of software engineering and their practical use. The book is designed to be used in introductory software engineering courses at all levels. It will also be valuable to programming practitioners who want to develop a better understanding of modern software engineering techniques.

Contents:

Software Process and Development Model/Software Project Management/Software Project Planning/Risk Analysis and Risk Management/Software Quality Assurance/Software Requirements/Software Design/Software Testing Techniques/Debugging Testing Tools and Standards/Software Maintenance/Index

Audience – Computer Science.

Statistics for Management Using Microsoft Excel



A. N. Sah

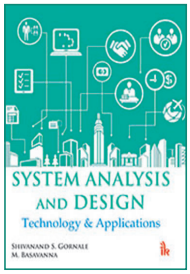
ISBN: 978-93-81141-98-4/Year 2013
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 525.00

(See on page 144)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

System Analysis and Design
Technology & Applications



Shivanand S. Gornale
M. Basavanna

ISBN: 978-93-85909-07-8/Year 2017
Size 18 cm × 24 cm/Pages 310
Paperback/₹ 435.00

Analysis and design of management information systems has come a long way and is an essential part of our daily lives in different ways. The theory of information system analysis and design is essential for understanding how to build and analyze a good information system. This book attempts to combine the features of management of information system analysis and design and helps students to understand the various tools and techniques enabling them to design their own management information systems. This book is student-friendly, and contains all that is required to make the undergraduate and postgraduate students expert in understanding the concepts of the subject. All the chapters are followed by exercises and objective questions to enable the readers to elaborate themselves for building the academic competency.

This book is useful for the students of Computer Application (BCA/MCA), Computer Science (B.Sc/M.Sc), Computer and Engineering and Information Communication Technology (BE/B.Tech) as well as for the students of other engineering disciplines. It also helps to prepare for competitive exams like NET, SLET and other relevant competitive examinations.

Salient Features:

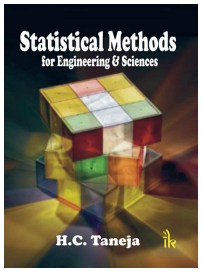
- Comprises 12 chapters and deals with theoretical and application aspects.
- Covers comprehensively software/system process, testing, documentation, fact finding and requirements.
- Includes more than 250 objective type questions.
- Provides review questions at the end of every chapter.

Contents:

1. Data and Information
2. Management Information System
3. Overview of System Analysis Design
4. System Development Life Cycle
5. Feasibility Study
6. System Requirement Specification and Analysis
7. System Design
8. Designing Input, Output and User Interface
9. Software/System Process
10. Software Testing
11. Software Documentation
12. Fact Finding Methods In System Requirements

Audience – Students of Computer Application (BCA/MCA), Computer Science (B.Sc/M.Sc), Computer and Engineering and Information Communication Technology (BE/B.Tech) as well as for the students of other engineering disciplines. Aspirants of NET, SLET, and other relevant competitive information.

Statistical Methods for Engineering and Sciences

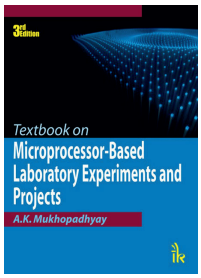


H. C. Taneja

ISBN: 978-93-80026-66-4/Year 2009
Size 18 cm × 24 cm/Pages 368
Paperback/₹ 565.00

(See on page 144)

Textbook on Microprocessor-based Laboratory Experiments and Projects
Third Edition



A.K. Mukhopadhyay

ISBN: 978-93-80578-04-0/Year 2010
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 425.00

The book develops course-work on microprocessor-based laboratory experiments and projects for engineering students.

In contains the introductory part of INTEL 8085-based microcomputer along with the architecture and organization, pin configuration, interrupts and interfacing techniques along with the instruction set. The instructions have been well illustrated along with their use in software development.

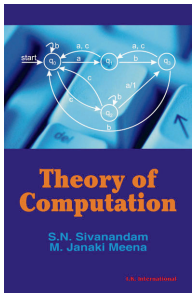
The book contains twenty four microprocessor-based projects including power factor determination of a synchronous motor, traffic light controller, washing machine controllers, etc. Some new experiments including replacement of logic gates and flip-flops by means of microprocessor, formation of mirror images, etc., have also been added. Intended for undergraduate and postgraduate students of electrical engineering, Computer Science, Electronics and Telecommunication and associated fields, researchers and professionals will also find it beneficia

Contents:

Introduction to Microprocessor and Microcomputer/The 8085A Based Microcomputer/The Programming Technique of INTEL 8085/Microprocessor-based Laboratory Experiments/ Some Microprocessor-based System Development and Projects/ Appendices/Index.

Audience – Undergraduate and Postgraduate students of Electrical Engineering, Computer Science, Electronics and Telecommunication.

Theory of Computation



S.N. Sivanandam • M. Janaki Meena

ISBN: 978-93-80026-20-6/Year 2009
Size 18 cm × 24 cm/Pages 520
Paperback /₹ 525.00

The book is meant for a wide range of students doing their undergraduation and postgraduation courses related to Computer Science. All the concepts are elaborated with illustrations. Algorithmic procedures are provided at the necessary locations. Numerous examples are given for similar but different kinds of problems. Problems similar to the examples are given as Exercises. Objective questions with solutions are given at the end of each chapter.

The basic concepts of automata theory, various types of automata and their limitations are given with examples. Turing machines are also dealt with in this book and the execution of Turing machines is traced for better understanding. Classification of decidable and undecidable problems is dealt with in detail.

The book will also be useful for students who are preparing for competitive examinations.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Salient Features:

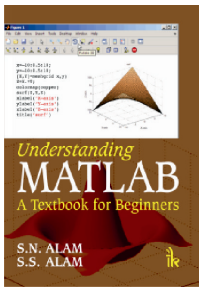
Detailed explanation of the concepts in formal languages and automata theory/Several pictorial representations for better understanding/ Simple stepwise procedure for designing finite and pushdown automata, designing Turing machines for recognizing languages and computing functions/Tracing the execution of the automata and Turing machines designed/Decidability and intractability are dealt with simple illustrations/About 350 solved problems, 200 exercise problems and 225 objective questions with answers/Syllabus covered for Theory of Computation of B.E., B.Tech., BCA, MCA, M.Sc. and M.E. of various universities.

Contents:

Basic Mathematical Concepts/Proof Techniques/Regular Languages and Finite Automata/Non-Deterministic Finite Automata/Properties of Regular Languages/Context Free Grammars/Pushdown Automata/ Context Free Languages and non-Context Free Languages/Turing Machines/Extensions to Basic Turing Machines/Chomsky's Hierarchy and Decidability/Tractability/Index.

Audience – Computer Science, B.E., B.Tech., BCA, MCA, M.Sc. and M.E.

Understanding MATLAB A Textbook for Beginners



S.N. Alam • S.S. Alam

ISBN: 978-93-82332-33-6/Year 2013
Size 18 cm × 24 cm/Pages 328
Paperback /₹ 645.00

This book is mainly for students and professionals who are trying to learn MATLAB through self-study. This book can be used by any one who is completely unacquainted with MATLAB. In a step-by-step process, this book tries to teach the readers how to write MATLAB programs in order to solve problems. The book intends to acquaint the user with a number of inbuilt functions and features of MATLAB with specific illustrations in the areas of science and technology. MATLAB is a high level computing language, which can be used in a wide range of areas. A large number of examples have been included in this book. Plots, matrix calculations, vectors, loops, functions, solving linear equations, integration, differentiation, ordinary differential equations, curve fitting, image processing, animation and a lot of other areas have been dealt with in this book.

Contents:

Introduction/Arrays, Strings and Data Structures/Plotting/Loops and Functions/Solving a System of Linear Equations/Integration, Differentiation and Ordinary Differential Equations/Statistical Functions, Line and Polynomial Fitting/Image Processing, Animation, Movies and Sound/Bibliography/Index.

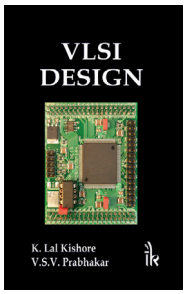
Audience – B.E & B. Tech students of Computer Science.

VLSI Design

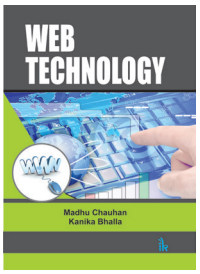
K. Lal Kishore
V.S.V. Prabhakar

ISBN: 978-93-80026-67-1/Year 2009
Size 18 cm × 24 cm/ Pages 416
Paperback/₹ 445.00

(See on page 80)



Web Technology



Madhu Chauhan
Kanika Bhalla

ISBN: 978-81-948676-7-8/Year 2020
Size 18 cm × 24 cm/Pages 372
Paperback /₹ 395.00

Web technology refers to the means by which computers communicate with each other using Markup languages and multimedia packages. This book provides a hands-on experience to the students to build real-world Web-based applications, and use a wide variety of Web development tools like HTML, CSS, JavaScript, XML, etc. It is divided into six sections with each section including chapters on relevant tools, including unsolved and solved programming questions along with multiple-choice questions, short and long answer questions to help the students in their examinations. Most of the problems have been adapted from previous year papers of various universities and competitive examinations.

Salient Features:

- • MCQs added at the end of each chapter.
- • Conceptual short and long questions at the end of each chapter.
- • Solved programming questions in each chapter.
- • Numerous examples and case studies

Contents:

Section 1: Internet and World Wide Web

Evolution of Internet and WWW/Concepts of Internet/Web Browsers

Section 2: Hypertext Markup Language

HTML: An Overview/HTML-Header/HTML-Body Basic Tags/ HTML-Formatting Tags/HTML-Phrase Tags/HTML Images/HTML Tables/HTML Lists/HTML Frames/HTML Forms

Section 3: HTML Styling/Cascading Style Sheets

Section 4: HTML JavaScript/JavaScript

Section 5: Dynamic HTML/DHTML

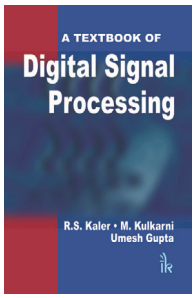
Section 6: Extensible Markup Language/XML (Extensible Markup Language)/Question Bank/Index

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www.techsarworld.com

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info@ikinternational.com

A Textbook of Digital Signal Processing



R.S. Kaler • M. Kulkarni • Umesh Gupta

ISBN: 978-93-80026-15-2/Year 2009
Size 18 cm × 24 cm/Pages 744
Paperback/₹ 575.00

This book presents theoretical and application topics in digital signal processing (DSP). The topics here comprise clever DSP "tricks of the trade" not covered in traditional DSP textbooks. Here we present new, but tried-n-true, clever implementations of digital filter design, spectrum analysis, signal generation, high-speed function approximation and various other DSP functions. This book is relevant to the needs of the working DSP engineer by helping bridge the theory-to-practice gap between introductory DSP textbooks and the esoteric, difficult to understand, academic journals. This book will be useful to experienced DSP engineers, due to its gentle tutorial style it will also be of considerable value to the DSP beginner. The mathematics used herein is simple algebra and the arithmetic of complex numbers, making this material accessible to a wide engineering and scientific audience. The chapters in this book are written in a stand alone manner, so the subject matter can be read in any desired order.

Contents:

Introduction to Digital Signal Processing/Review of Signals and Systems/Fourier Series and Fourier Transform/Discrete Fourier Transform (DFT) and Fast Fourier Transform (FFT)/Z-Transform/Digital Filter Structures and Design/Finite Impulse Response Filter Designs/IIR Filter Designs/Adaptive Filters/Multirate Digital Signal Processing/Introduction and Basics of Two-Dimensional DSP/Equalization Algorithms/Digital Signal Processors/DSP Applications/Appendices/Glossary/Index.

Audience – Undergraduate students in Electronics and Communication Engineering.

Analog and Digital Electronics



Sonveer Singh
Sanjay Agrawal

ISBN: 978-93-86768-57-5/Year 2019
Size: 18 cm × 24 cm/Pages 638
Paperback/₹ 525.00

The study of Analog and Digital electronics is essential for students pursuing degrees in electrical, electronics, computer science, or information technology. Analog and Digital electronics are found in a broad range of applications within these disciplines, from analog circuit design to digital circuit design and analysis. This book deals with the theory and practices of Analog and Digital electronics. It starts with basics of electronics and goes on to discuss special types of Diodes, BJT and FET transistors, Amplifiers, and finally ends up with the coverage of Oscillators and Power in Digital circuits. This book strictly follows most of the syllabus of analog and digital electronics without sacrificing the basic principles and depth of the subject.

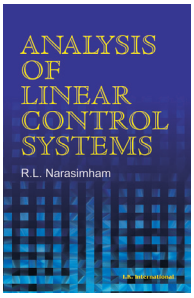
Salient Features:

- Better understanding of concepts and basic principles.
- Fundamentals explained in a simple way.
- Simple, systematic and stepwise procedure to solve problems.
- More than 100 solved problems; most of these problems have appeared in various universities and competitive examinations.
- Objective type questions with answers.

Contents:

Introduction to Electronics/Semiconductor Physics/Special Types of Diode/Bipolar Junction Transistor/Transistor Biasing and Stabilization of Operating Point/Field Effect Transistor/Frequency Response of BJT and JFET/Feedback Amplifiers/Oscillators/Combinational Logic Circuits/Sequential Logic Circuits and Systems/Applications of Operational Amplifier/Memories/Energy and Power in Digital Circuits/Index

Analysis of Linear Control System



R.L. Narasimham

ISBN: 978-81-89866-27-3/Year 2008
Size 16 cm × 24 cm/Pages 832
Paperback/₹ 625.00

This book provides an up-to-date information on a number of important topics in control systems engineering.

Salient Features:

- Introduce P-I-D controllers in time-response analysis of control systems including steady-state error and static error constants
- Emphasis on control system components including, sensors, amplidyne, stepper motor including magnetic amplifiers
- Emphasis on the frequency–domain design methods using Root Locus and Nyquist/Bode/Nicholas Plots • Designed stability of control system is a new direction which is not found in any other similar books
- State variable representation of dynamic system are presented with linear algebra concepts
- Design and compensation techniques dealt largely on Root Locus lag and Bode Plot lag compensation techniques.

The book includes:

- Major historical landmarks in the development of the area of control systems engineering
- Algebraic solution through Laplace transform of linear differential equations which describe the operation of control systems
- Information concerning the basis or inherent operating characteristics of a system
- Mathematical modeling of electromechanical system typical transducers and control systems
- Stability analysis
- Application of the root-locus method to the design of control systems
- Frequency response analysis with all varieties of graphical plots including relative stability
- State-space methods
- Compensation techniques.

A large number of solved and unsolved problems, review questions, MCQs are the prime features of the book.

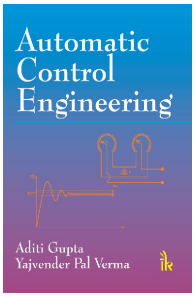
Contents:

Introduction to Control Systems/Mathematical Models of Physical Systems/Time Response Analysis of Control Systems/Control System Components/Stability of Control Systems/Root Locus Techniques/Frequency Response Analysis of Control Systems/State Variable Representation of Dynamic Systems/Design and Compensation of Control Systems/Objective Questions with Answers/References/Index.

Audience – Students of electrical/electronics/chemical/instrumentation disciplines and those appearing for AMIE, GATE, Civil and Engineering services.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Automatic Control Engineering



Aditi Gupta • Yajvender Pal Verma

ISBN: 978-93-84588-23-6/Year 2015
Size 18 cm × 24 cm/Pages 312
Paperback/₹ 475.00

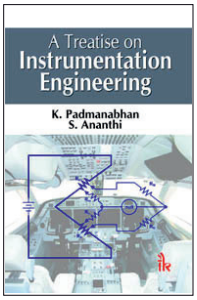
The book presents the topics of control engineering in a relative easy language. It is compulsory for every student to start with the basic concepts and gradually reach to the competitive level. This book includes competitive objective type questions at the end of each chapter. Moreover, the major complex topics of control engineering like Root Locus Technique, Bode Plot and Nyquist Criterion are explained in an easy manner using step-by-step method. In addition to this, some advanced topics of control engineering like sampled data control systems and robust control systems are also included in this book.

Contents:

An introduction/Control system representation/Modelling of control systems/Effect of feedback on control system/Time response analysis/Concepts of stability and its alegebric solutions/Root locus technique/Frequency response analysis/Control system components/Robust control system/Sampled data control system/Appendix I: Laplace transforms of some useful functions/Appendix II: Answers to unsolved excercise (selected numericals)/Appendix III: References/Index

Audience – B.E. & B.Tech Students.

A Treatise on Instrumentation Engineering

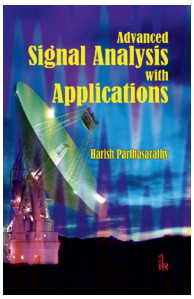


K. Padmanabhan • S. Ananthi

ISBN: 978-93-81141-03-8/Year 2011
Size 16 cm × 24 cm/Pages 776
Paperback/₹ 745.00

(See on page 66)

Advanced Signal Analysis with Applications

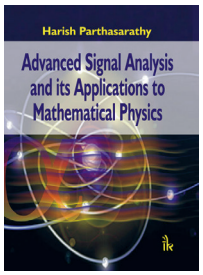


Harish Parthasarathy

ISBN: 978-93-81141-09-0/Year 2011
Size 22 cm × 28 cm/Pages 420
Hardback/₹ 1095.00

(See on page 68)

Advanced Signal Analysis and its Applications to Mathematical Physics

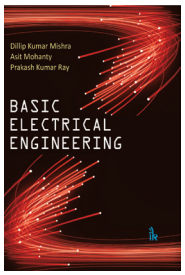


Harish Parthasarathy

ISBN: 978-93-80026-54-1/Year 2009
Size 21 cm × 28 cm/Pages 712
Hardback/₹ 1995.00

(See on page 66)

Basic Electrical Engineering



Dillip Kumar Mishra
Asit Mohanty
Prakash Kumar Ray

ISBN: 978-9386768-32-2/Year 2019
Size 18×24 cm/Pages 376
Paperback/₹ 515.00

Basic Electrical Engineering lays strong emphasis on basic principles and incorporates advanced concepts. A careful selection of the text materials and worked out examples help the students to grasp the course of basic electrical engineering. This book presents a blend of theoretical details with numerous problems for easy understanding and different applications. In relevant portions of the text, additional discussions and illustrative examples have been incorporated to make the pursuit of the study of Electrical Engineering a better experience for the students.

Salient Features:

- The subject presented in a graded manner, containing a detailed exposition of the fundamentals.
- Illustrated examples demonstrate relevant applications of electrical engineering and simple problem solving methodology.
- All chapters are followed by important points and numerical examples.
- Important questions of various universities are included and objective questions are mentioned for better understanding.
- The figures and diagrams support the concepts and aid in the understanding of the subject.

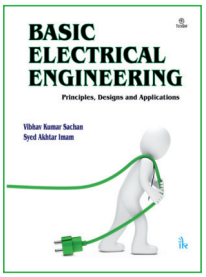
Contents:

Introduction/DC Network/Resistive Network Analysis/ Network Theorem/AC network analysis/AC power/Electronics Instrumentation & Measurement/Power System/Principles of electromechanics/Transformer/DC Machine/Alternator/Three Phase Induction Motor/Single Phase Induction Motor

Audience – B. Tech and B.E. courses..

Basic Electrical Engineering *Principles, Designs and Applications*

Forthcoming



Dr Vibhav Kumar Sachan
Dr Syed Akhtar Imam

ISBN: 978-93-90620-63-0/Year 2024
Size: 18 cm × 24 cm/Pages: TBA
Paperback/₹ TBA

Basic Electrical Engineering: Principles, Designs and Applications has been widely utilized in recent years in electrical engineering, microprocessor, electrical drives, and power electronics research, among other fields.

This aims to cater to the needs of the undergraduate courses in the discipline of Electronics & Communication Engineering, Electronics & Instrumentation Engineering, Electrical & Electronics Engineering, Instrumentation and Control Engineering and postgraduate students specializing in Electronics, Control Engineering. It will also serve as reference material for engineers employed in industry. The fundamental concepts and principles behind of transformer, three phase circuits and electrical generatorsand motors are explained in a simple, easy- to- understand manner.

Each chapter contains a good number of short answers and answer of multiple choice questions with explanation which makes the book quite useful for Indian Engineering Services(IES), Graduate Aptitude Test in Engineering (GATE),National Eligibility Test(NET), State EligibityTest(SET), University Grants Commission- Council of Scientific & Industrial Reasearch (UGC-CSIR) and other enterence examination.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

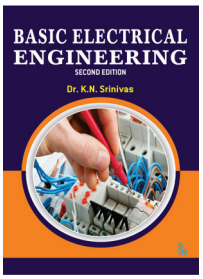
+91-011-43205400
info@ikinternational.com

Salient Features:

- Chapters contain worked out problems and exercises.
- Detailed coverage of AC and DC Circuit Analysis, Network Reduction and Network Theorems and Resonance and Coupled Circuits.
- Clear perception of the various problems with a large number of neat, well drawn and illustrative diagrams.

Basic Electrical Engineering

Second Edition



K.N. Srinivas

ISBN: 978-93-90620-39-5/Year 2021
Size 18 cm × 24 cm/Pages 448
Paperback/₹ 495.00

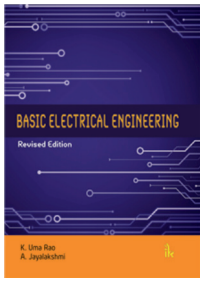
"Basic Electrical Engineering" title is intended to educate students of first year undergraduate engineering programmes of all branches. The book presents them all the key elements of electrical engineering – particularly the basic laws, electromagnetism, materials, circuits, circuit theorem, DC and AC machines, concepts of measuring instruments, concept power system and power electronics and basis behind wiring. In order to cope up with the outcome-based education, a proper introduction of each chapter is given in this edition. 'Reflection Section' provided at various junctions of a chapter will serve as a check-point for the reader to verify his/her conceptual understanding before proceeding further. Numerous illustrative examples and exercise will be an additional feature to ease the reader's understanding.

Contents:

Basic Electricity/Part I: DC Circuits/Alternating Current/Part II: AC Fundamentals/Part III: Series and Parallel AC Circuit/Part IV: Resonance/Part V: Network Analysis and Theorems/Part VI: Concept of 3-Phase EMF Generation **Magnetism and Electromagnetism**/Part I/Part II: Magnetic Characteristics of Materials **Electric Machines**/Part I: DC Machines/Part II: Transformers **AC Machines/Part I:** Synchronous Machines/Part II : Three-phase Induction Motor/Part III: Single-Phase Induction Motor Control System/Introduction to Power Electronics/Power System: An Overview/Measuring Instruments/Domestic Wiring/Appendix/Index

Audience – B. Tech Core (All branches)

Basics of Electrical Engineering



K Uma Rao • A Jayalakshmi

ISBN: 978-93-85909-28-3/Year 2016
Size 18 cm × 24 cm/Pages 686
Paperback/₹ 645.00

This book on Basic Electrical Engineering is envisaged to bridge the gap in the knowledge of day-to-day applications of electrical engineering. It is divided into two parts, with Part- A covering the important topics of circuit analysis and basic instrumentation, and Part-B dealing with the concepts of electrical machines.

Simple presentation of the topics with emphasis on important concepts is the essence of this book.

The book has been designed keeping in view the syllabi requirements of the core engineering course of many universities. With its coverage and treatment, the book is an indispensable textbook for the first/second year students of all engineering branches.

Salient Features:

- Includes over 500 solved examples and day-to-day electrical applications.
- Explains common wiring schemes and earthing practices.
- Each chapter includes a lot of questions and unsolved problems with answer keys.
- Provides 14 experiments on electrical machines.

Contents:

Part I Circuits and Measurements

1. Basic Laws/ 2. Electromagnetism/ 3. Methods of Circuit Analysis/ 4. Single Phase ac Circuits/ 5. Three Phase Circuits/ 6. Electrical Wiring and Estimation/ 7. Electrical Instruments.

Part II Electric Machines

8. Introduction to Electric Machines/ 9. DC Machines – Generators/ 10. DC Motors/ 11. Transformers/ 12. Three Phase Induction Motors/ 13. Alternators/ 14. Single Phase Induction Motors/ 15. Lab Manual – Electrical Machines Lab/ Index.

Audience – All undergraduate engineering students.

Basic Electrical Science & Technology

Forthcoming

S K Singh
Charanjeet Madan

ISBN: 978-93-90620-67-8/Year 2024
Size ... cm × ... cm/Pages TBA
Paperback/₹ TBA

This book provides an overview of the basics of electrical engineering that are required at the undergraduate level. The subject's complexity level has been kept to a minimal to make it easier for students to comprehend the fundamentals. It provides unparalleled overview of the whole spectra of all significant subjects. The reading is made more engaging by the extensive use of images, examples, and exercises that correspond with the chapter's progressive growth.

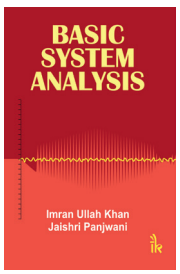
Salient Features:

- The book has been written in a lucid manner.
- The entire course curriculum for all Indian universities is covered in the book.
- The numerical problems have been resolved in a way that makes it simple for students to comprehend the theoretical portion.

Contents

To be finalized/Basic Concepts of Currents/D.C. Circuits/D.C. Circuits Theorems/Chemical Effect of Current or Battery/Capacitance/Electromagnetic Induction and Electromagnetism/A.C. Fundamentals/A.C. Series Circuits/Parallel A.C. Circuits/ÚA.C. Circuits/Transients/Electrical Installation/Electrical Measuring Instruments/Economic of Generation (Power Plant Economics)/Power – Generation/Single-Phase Transformer/Three – Phase Transformer/D.C. Generator/D.C. Motor/Three-Phase Induction Motor/Alternator or Synchronous Generator/Synchronous Motor/Single-Phase Induction Motor or Fractional Horse-Power Motor.

Basic System Analysis



I.U. Khan • Jaishri Panjwani

ISBN: 978-93-81141-16-8/Year 2012
Size 18 cm × 24 cm/Pages 336
Paperback/₹ 425.00

This book deals with the properties and classification of Basic System Analysis. It introduces the important principles and properties of Fourier transform (Continuous time), Laplace transform, Z-transform, Fourier series, Linear time invariant (LTI) systems, Convolution, etc. This subject covers basic concepts required for digital signal processing, communication systems, networks and similar subjects.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

To get an edge in the competitive market, objective type questions with answers, question bank with answers have been included. This book consists of five chapters in all and covers the complete syllabi of Basic System Analysis of various universities.

Solved examples, solved questions from previous year question papers and model question papers are provided at the end of the book. The book has been made adequately self-sufficient for students to avoid the need for another support book.

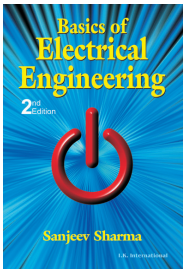
Contents:

Introduction to Continuous-Time Signals and Systems/Fourier Series and Fourier Transform/Laplace Transform Analysis/State Variable Analysis/Z-transform/Model Question Paper/Appendices/Index

Audience – UG & PG students of Electrical, Electronics and Communication Engineering.

Basics of Electrical Engineering

Second Edition



Sanjeev Sharma

ISBN: 978-81-906942-5-4/Year 2008
Size 16cm × 24cm/Pages 808
Paperback/₹ 525.00

The book provides theory with a large number of numerical problems. Questions related to the topic at the end of each chapter are also given. Solved question papers of previous years and important formulas are appended at the end of the book.

Salient Features:

- More than 500 solved numerical problems.
- Problems of GATE and other competitive exams.
- Solutions and discussion on the UPSC problems and solutions.
- Standard tricks to solve difficult problems that will help the students not only in the university exams but also in the competitive exams.

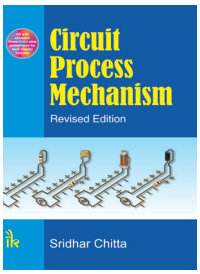
Contents:

D.C. Circuit Analysis and Network Theorems/Steady-State Analysis of Single Phase A.C. Circuit/Three-Phase A.C. Circuits/Measuring Instruments/Introduction to Power System/Magnetic Circuits/Single-Phase Transformer/Direct-Current Machines/Synchronous Machine/Three-Phase Induction Machine/Single-Phase Induction Motor/Appendices/Index.

Audience – B.E. & B.Tech. students.

Circuit Process Mechanism

Revised Edition



Sridhar Chitta

ISBN: 978-93-81141-43-4/Year 2012
Size 18 cm × 24 cm/Pages 432
Hardback/₹ 1195.00

This book deals exhaustively with electrical and electronic circuit processes. Most textbooks neither describe accurately nor precisely the mechanism of the processes in the operation of electrical and electronic circuits. Common misconceptions that are dispelled in the book are:

- The electric field inside a metal is always zero (even when the system is not in static equilibrium);
- Drifting electrons push each other through a wire just as water molecules push each other through a pipe (despite charge neutrality inside the metal);
- There cannot be any potential difference across an open switch because $V = IR$, and there is no I;
- Electrons travel at the speed of light in wires; a circuit requires two separate wires for operation.

The contents provide an accurate and correct viewpoint of these very fundamental electric and magnetic processes. Every case has been dealt so that a present-day electrical and electronic engineer understands these physical and applied aspects at the first level before he/she studies topics of electromagnetic field theory and electrical circuits or networks. Electrostatics and electric circuits belong to one science and the contents of the book are vital to bridge the gap that present curricula have created between them. Based on latest research findings that unify the two concepts, using vivid diagrams depicting circuit processes with states evolving in time, the student is guided smoothly through the topics on the mechanism of conduction, operation of capacitive and inductive circuits subject to steady and alternating voltages; operation of motors, generators, microphones and loudspeakers and p-n junctions.

The revised edition includes a section describing the function, fabrication and operation of non-rectifying contacts in the chapter on p-n junctions along with animated power point slides depicting their operation in the accompanying CD.

The chapters combine text with several illustrative figures and derivations of formulae. The animated power point slides (included in the accompanying CD) for all chapters cover every pertinent principle that will aid readers in visualizing circuit processes. The CD accompanying this edition includes results of simulation runs of circuits that superimpose ac signals on dc voltages and of CR phase-shifting networks typically used in RC Phase shift oscillators. Procedures to obtain these using TINA simulation software are also provided in the CD.

The contents of the chapters are aimed to develop a strong sense of feel of the mechanism of electric and electromagnetic phenomenon, the important role of electric fields in circuit processes and the transport of energy in circuits. They enhance analytical ability and reasoning skills in solving electric and electronic circuit problems. With critical inputs and encouragement from renowned Professors Hermann Haertel, Bruce A. Sherwood, David J. Griffiths, Norris W. Preyer, Satyabrata Jit and Dipankar and several other experts in this important field, the book is strongly recommended for basic electrical and electronics courses as a text to give students a conceptual and physical basis of electric and magnetic fields.

Contents:

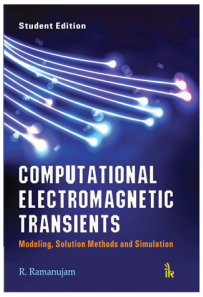
Surface Charges and Conduction Processes/Capacitors in Circuits/Superposition of AC Signals on DC Voltages; Coupling of AC Signal Sources to Amplifier Inputs/Electrical Energy, Electromagnetic Energy and Power/Magnetic Field and Faraday's Law; Coulomb and Non-Coulomb Electric Fields; Self- Induction; Seeing Atoms/Magnetic Forces; Magnetic Forces Do No Work!; How a Wire Moves /Faraday's Law; Motional emf; How Generators and Microphones Operate/Magnetic Forces; Magnetic Moment; Magnetic Forces on Magnetic Moment; Torque Production in Motors; Motor and Load Torque; Back emf; How Motors and Loudspeakers Operate; Magnetic Fields in Matter/The Role of Surface Charges in Diodes; Formation of a p-n Junction; a Diode in Forward and Reverse Bias; Why Vo can Never be Made Zero; Rectification/Appendices/References/Index.

Audience – First and second year students of Electrical, Electronics and Communication, and Instrumentation Engineering; M.Sc Electronics; practising Electrical and Electronics engineers.

Computational Electromagnetic Transients

Modeling, Solution Methods and Simulation

Student Edition



R. Ramanujam

ISBN: 978-93-82332-74-9/Year 2017
Size 18 cm × 24 cm/Pages 592
Paperback/₹ 575.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

This book is woven around theory, models, solution methods and simulation techniques evolved for several versions of EMTP for over nearly five decades. However, the focus is on one particular version – Microtran, which is from the University of British Columbia (UBC).

Being more than a first level reference, this book does not address topics found in common textbooks on power system transients. The focus in this book is modeling and simulation algorithms for digital simulation and computation much like emphasis laid in textbooks for computer-aided load flow, fault and stability studies. This book is unique in the sense that it covers topics not found in common text books on transients. These include:

- Modeling of frequency-dependent lines and cables
- Comprehensive transformer models including saturation
- Nonlinear and time-varying elements
- Detailed models of synchronous and induction machines and associated numerical methods and algorithms
- Case studies which would guide the student in the preparation of the data and interpretation of the results and would help the instructors to create their own examples.

Being a first book of its kind, The Transient Analysis of Control Systems (TACS) module has not been covered.

This book is suitable for final semesters of the undergraduate program and for post-graduate program and for practising engineers in power transmission companies.

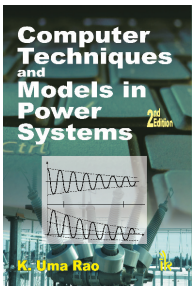
Contents:

Overview/About EMTP: modelling and simulation capabilities/ Parameters and modeling of overhead lines/Underground cables/ Line and cable parameter evaluation programs/Parameters and modeling of transformers/Parameters and modeling of rotating machines/Selected solution methods and interfacing techniques in EMTP/Examples and case studies using EMTP/Numerical methods and computational algorithms relevant to EMTP

Audience – Postgraduate and research scholars.

Computer Techniques and Models in Power Systems

Second Edition



K. Uma Rao

ISBN: 978-93-82332-31-2/Year 2014
Size 18 cm × 24 cm/Pages 634
Paperback/₹ 665.00

The book deals with the application of digital computers for power system analysis including fault analysis, load flows, stability assessment, economic operation and power system control. The book also covers extensively modeling of various power system components. The required mathematical background is presented at the appropriate sections in the book. A sincere attempt has been made to include a number of solved examples in every chapter, so that the students get an insight into the problems in practical power systems. Results from simulation are presented wherever applicable. The simulations have been carried out in MATLAB. The book covers more than a semester course. It can be used for UG courses on Power System Analysis, Computer applications in power system analysis, modeling of power system components, power system operation and control. It is also useful to postgraduate students of power engineering.

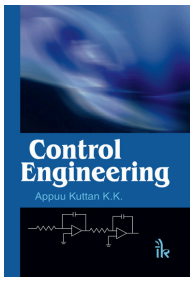
This chapter has program codes, sample data and results, and exercises to strengthen the programming skills of students.

Contents:

Basic principles/Network topology/Network matrices/Symmetrical faults/Symmetrical components/Unsymmetrical faults/Power flow studies/Economic operation of power system/Power system stability/ Modeling of synchronous Machine/Modeling of Excitation System/ Modeling of prime movers and loads/Load frequency control/Power system simulation with matlab/Appendix/Bibliography/Index

Audience – PG students of power engineering.

Control Engineering



Appu Kuttan K.K.

ISBN: 978-93-80026-81-7/Year 2009
Size 16 cm × 24 cm/Pages 340
Paperback/₹ 365.00

The book presents control engineering methodology based on mathematical fundamentals, stresses physical systems modeling and practical control system design. The book also includes the advanced topics on control engineering such as robust control, observer design, optimal control, Lyapunov's stability and digital control system.

The book provides:

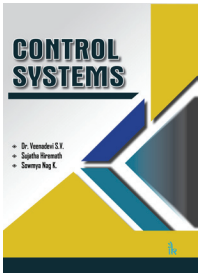
- Clear exposition of the basic principle of control system design techniques using frequency and time domain method.
- An integrated design and analysis approach to real world engineering problems.
- A supplement for modeling and design process using MATLAB
- P, PI and PID controller design using stater space model.

Contents:

Introduction/Response of a Control System/Frequency Response Analysis of a Control System/Controllers and Compensator Design/ Modern Control Engineering/Dynamic Compensator and Robust Control/Observer Design and Optimal Control/Digital Control System/Bibilography/Appendices: (A) Laplace Transform/(B) Partial Fractions/(C) A Review of Complex Variables/(D) The Principle of Argument/(E) Summary of Matrix Theory/(F) Laplace and z Transform/(G) MATLAB and Control System Tool Box/(H) Transfer Function and Signals/Index.

Audience – Undergraduate and Postgraduate students of Engineering.

Control Systems



Dr. Veenadevi. S.V.
Sujatha Hiremath
Soumya Nag K.

ISBN: 978-93-90620-70-8/Year 2022
Size 18 cm × 24 cm/Pages 648
Paperback/₹ 695.00

This book provides a comprehensive coverage of the subject for undergraduate students (BE/ BTech) of engineering disciplines. Relevant numerical questions of GATE have been solved to make the book suitable for the students appearing in various entrance examinations. All the solved and unsolved problems in this book are tested and illustrate the topics thoroughly. Emphasis is laid on the pedagogical aspects of the subject.

Spread in 10 chapters, the book broadly deals with:

- basic concepts of control systems
- input-output relationship of the system
- mathematical modeling of physical systems including mechanical and electrical systems, force-voltage and force-current analogy systems
- block diagram representation of systems
- time response analysis
- stability of control systems and Routh-Hurwitz criteria
- root locus method
- frequency domain analysis

- polar plot
- compensators and PI, PD, PID controllers
- state variable approach
- concepts of controllability and absorbability

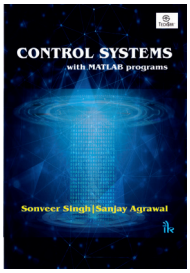
Contents:

Introduction to Control System/Mathematical Models of Physical Systems/Block Diagram and Signal Flowgraph/Time Response of Feedback Control Systems/Stability Analysis/Root Locus Technique/ Frequency Response Analysis/Stability in Frequency Domain/ Introduction to Design/State Variable Analysis and Design/Index

Audience – BE & B.Tech students.

Control Systems

(with Matlab Programs)



Sonveer Singh
Sanjay Agrawal

ISBN: 978-93-90620-01-2/Year 2023
Size 18 cm × 24 cm/Pages 688
Paperback/₹ 995.00

In modern era, a control system plays a vital role in human life. A control system is an interconnection of components forming a system configuration in which quantity of interest is maintained or altered in accordance with a desired manner.

This book covers various aspects of control systems like reduction techniques of multiple systems, time response analysis of the three orders of control systems and steady state error of different systems. While delving into the finer details of the subject, the book explains different components of control system like actuators, sensors, etc. As the learners progress with these components, the book explains the stability of control system which affects its performance of control system. The root locus techniques of different systems and their frequency response analysis has been explained in a simple manner. The book has also dealt with stability in frequency domain, review of state variable techniques and also introduces design to the learner.

This book is designed for undergraduate engineering students of different branches in the field of control system. This book strictly follows the syllabus of various universities without sacrificing the basic principles and depth of the subject.

Salient Features

- Easy explanation for better understanding of concepts and basic principles.
- Includes solved problems, most of the problems have appeared in different universities and various competitive examinations such as GATE, IES,etc
- More than 150 objective type questions with answers.
- Offers a supplement which emphasizes modeling and the design process using MATLAB to read and initiate to start building the programs.
- Better explanation of concepts and basic principles.

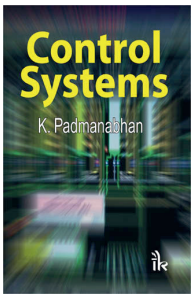
Contents

Introduction to Control System/Reduction of Multiple Subsystems/ Time Response Analysis/Steady State Errors/Control System Components/Stability of Control System/Root Locus Technique/ Frequency Response Analysis/Stability in Frequency Domain/ Introduction to Design/Review of State Variable Technique/Index

Audience – Undergraduate studentsof Engineering and postgraduate students of Physics and Electronics Engineering

Shelving – Electrical/Electronics Engineering

Control Systems



K. Padmanabhan

ISBN: 978-93-80578-18-7/Year 2010
Size 16 cm × 24 cm/Pages 592
Paperback/₹ 425.00

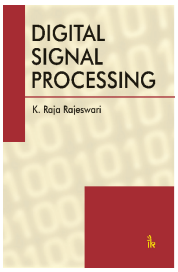
Control Systems is a subject which is part of the curriculum in various disciplines – Physics, Electrical & Electronic Engineering, Mechanical Engineering, Chemical Engineering and so on. Whether we control a gun-director servo, a voltage level or a temperature the underlying principle is the same– 'Feedback Control!' there may be more than one variable to control and so also there would be several inputs and disturbances which have to be taken into account. The several parts of a control system are regarded as blocks, irrespective of their physical size and each such block is defined by the mathematical relationship between its input and output. Knowing this transfer function, the control aspects are studied. It is possible to compensate the system with additional 'networks' or controllers to provide a stable error-free system with a fast-acting control behaviour. There are several models to do these. This book describes all of these, both for continuous time control and discrete-time control. Components involving nonlinearity are also studied using the phase plane method.

Contents:

Response of Control Systems and Servomechanisms/Transfer Functions and Stability/Nyquist Criteria and Stability/Bode Plots and Performance Criteria/Compensation and Design of Linear Control Systems/The Root Locus Method/Control System Components-I/ Control System Components-II/Process Control/Non-linear Elements in Control Systems/State Space Analysis/Discrete Time Control System/Fuzzy Logic Control Systems/Computer Aided Control System Design – Tool Box/Index.

Audience – Undergraduate students of Engineering and Postgraduate students of Physics and Electronics Engineering.

Digital Signal Processing

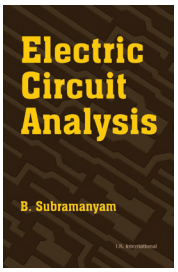


K. Raja Rajeswari

ISBN: 978-93-82332-91-6/Year 2015
Size 18 cm × 24 cm/Pages 294
Parperback/₹ 425.00

(See on page 38)

Electric Circuit Analysis



B. Subramanyam

ISBN: 978-81-89866-44-0/Year 2008
Size 16 cm × 24 cm/Pages 748
Paperback/₹ 475.00

Electric Circuit Analysis provide comprehensive and critical analysis of electrical circuits for better understanding of the physical systems using electrical simulating systems. It helps the students of EEE and ECE to thoroughly know the state-of-the-art of this subject. Each chapter functions as a stand-alone guide to a critical topic. Most of the important topics covered in this book provide greater details, to use them properly in understanding of electrical machines, power systems, control systems, electronic devices and circuits, pulse digital and power electronic circuits. A large number of solved numerical problems selected from GATE, UPSC and other university examinations are included. A large section of MCQs is included at the end of the book. This book is suitable for undergraduate courses in Electrical Engineering and

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

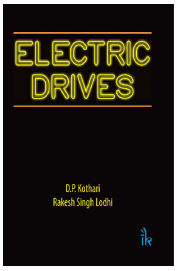
Electronics and Communication Enginnering. It is also useful for practising engineers and those appearing for Engineering Services Examinations like GATE, UPSC, etc.

Contents:

Network Components and Network Equations/Network Topology/ Sinusoidal Steady State Analysis of Electrical Circuits/Transient Response of Electrical Circuits/Resonance in AC Circuits/Locus Diagrams/Fourier Analysis of AC Circuits/Polyphase Circuits/ Network Theorems/Two-Port Parameters/Network Functions/ Examples/Appendix/Index.

Audience – UG courses in Electrical and Electronic and Communication Engineering.

Electric Drives



D.P. Kothari
Rakesh Singh Lodhi

ISBN: 978-93-84588-12-0/Year 2016
Size 16 cm × 24 cm/Pages 200
Paperback/₹ 355.00

Meant for undergraduate and postgraduate students in electrical, electrical & electronics, power electronics and automation industries courses (B.E./B.Tech./M.E./M.Tech. Ph.D.) engineering, this book presents a unique self study material on electrical drives, solid state drives, industrial drives power semiconductor drives.

Broadly it deals with:

- Electrical Drives
- DC Drives
- Four Quadrant Operations
- Induction Motor Drives
- Stator and Rotor Controls of Induction Motors
- Indirect Vector Control of Induction Motor
- Synchronous Motor Drives
- Industrial Application of Electric Drives.

A large number of solved and unsolved problems with answers make this book suitable for undergraduate and postgraduate courses in electrical drives. Prasticing engineers and those appearing for engineering services examinations will also find this book useful.

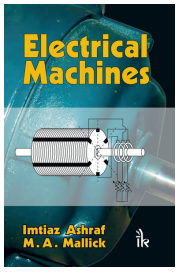
This book will also be beneficial to the students, faculties and researchers for the preparation of project work, studies and other competitive examinations.

Contents:

Introduction/Electrical drives/DC drives/Four quadrant operations of DC drives/Induction motor drives/Stator control of induction motor/Rotor control of induction motor/Indirect vector control of induction motor/Synchronous motor drives/Industrial application of electric drives/Appendix: A/Appendix: B/Appendix: C/Appendix: D/References/Index

Audience – B.E & B. Tech. students.

Electrical Machines



Imtiaz Ashraf • M.A. Mallick

ISBN: 978-93-80026-09-1/Year 2009
Size 16 cm × 24 cm/Pages 528
Paperback/₹ 575.00

The contribution of Electrical Machines is enormous in the present technological world.

A number of new variants of basic machines have been developed in the past years and new topologies have emerged such as permanent magnet machine, reluctance machine, brushless DC. machines and linear machines. Apart from the design and basic structure of machines, their control algorithm is another aspect where effort is being made worldwide. Nevertheless the basic underlying principle of operation remains more or less same for all types of machines. It is this fundamental concept where emphasis is being put in the present textbook.

Spread in 12 chapters the book broadly describes:

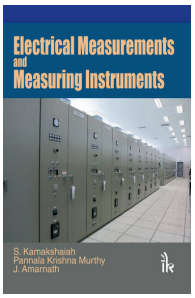
- Fundamental concepts of rotating machine
- Properties and behavior of various magnetic materials
- Principle of electromechanical energy conversion
- Principle of operation of generators and motors.
- Transformers, their types and the underlying operating principle
- A.C. and D.C. machines and their types
- Constructional features of A.C. and D.C. machines
- Single phase machines
- Industrial applications of A.C. and D.C. drives
- Experiments

Contents:

Review of Basic Circuits/Review of Basic Laws/Magnetic Circuits/ Principles of Electromechanical Energy Conversion/Transformers/Direct Current Generators/DC Motors/Induction Machines/Synchronous Generators/Synchronous Motors/Single Phase IM/Appendix A: Trignometric Relations/Appendix B: Laplace Transform/Appendix C: Symbols/Appendix D: Units/Conversions/References/Index.

Audience – B.E. & B.Tech. students.

Electrical Measurements and Measuring Instruments



S. Kamakshaiah
Pannala Krishna Murthy
J. Amarnath

ISBN: 978-93-80578-76-7/Year 2011
Size 16 cm × 24 cm/Pages 480
Paperback/₹ 565.00

The importance of measurements is well known in the field of Engineering. This book has been designed as a basic text for the undergraduate students of Electrical Engineering. The primary objective of this book is to present the concepts of Electrical Measurements in a clear and interesting manner so as to make an average student understand the subject independently. The extract and clear representation of various diagrams of measuring instruments is a distinguished feature of this book. With all these features this book would be extremely useful not only for the undergraduate engineering students but also for AMIE and GATE candidates.

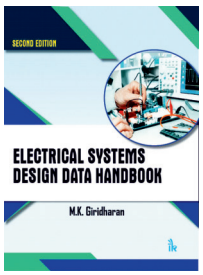
Contents:

Measuring Instruments/Indicating Instruments/Instrument Transformers/Measurement of Power/Supply Meters/ Potentiometers/Measurement of Resistance/A.C. Bridges/Magnetic Measurements/Index

Audience – Undergraduate students of Electrical Engineering and AMIE, GATE candidates.

Electrical Systems Design Data Handbook

Second Edition



M.K. Giridharan

ISBN: 978-93-90620-78-4/Year 2022
Size 18 cm × 24 cm/Pages 134
Paperback/₹ 215.00

With energy resources becoming scarce and costly, and electrical energy being the most sought after form of energy, the designers of electrical systems are

faced with the challenge of guaranteeing energy efficiency, quality and scheduling to the satisfaction of the corporate customers. This demands that the electrical systems designers to be more versatile and more effective managers of energy resources. This data handbook is intended to be used as design assistance to the beginners in the field of Electrical Systems design and provides them an easy access to the relevant data required for their design without having to waste their time and energy in searching for the required data to be used in the design problem. This handbook can be permitted to be used inside the examination hall as a reference handbook.

Salient Features

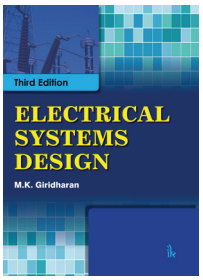
- data regarding different categories are consolidated and presented in an orderly manner.
- quick access to the relevant data for the designers saving a lot of time and energy.
- a compact collection of data which can even be permitted for reference in the examination halls.

Contents

SI Units and Quantities/Alphanumeric Notation, Graphical Symbols and Colours (NEC 2011)/Lighting Design/Transformer Substations/ Conductor S and Cables/Motor S/Switchgears/System Eart Hing/ Power Quality/Solar PV Systems for Household Applications/ Emergency and Stand by Generation

Audience – Students of Electrical Engineering of Electrical Systems Design

Electrical Systems Design



Third Edition

M.K. Giridharan

ISBN: 978-93-90620-13-5/Year 2022
Size 18 cm × 24 cm/Pages 426
Paperback/₹ 525.00

Electrical industry world wide is undergoing rapid and widespread changes. These changes have been largely driven by market oriented restructuring policies of the respective countries and increasing global environmental concerns leading to dominant use of renewable sources of energy.

This third edition of the well-accepted book continues in its tradition of giving a comprehensive treatment of electrical system design. Keeping in view the current advances and environmental consciousness, it also covers solar PV installation and emergency/standby generation installation. It covers on one hand the guiding principles of electrical system design, lighting design, designing for household electricity installation, industrial electrical system installation, exterior lighting, cable sizing, earthing and so on. On the other hand it also discusses the challenges that an electrical system designer faces to improve power quality, power factor, and energy efficiency. The progressive features like de-licensing of power generation, open access in power transmission, decentralized management of distribution, power trading, etc., envisaged in the new Act have necessitated the electrical system designers to design electrical systems which are more energy efficient, environment friendly, reliable and with reduced greenhouse gas emission.

The book addresses these problems in the light of the Electricity Act 2003 and Energy Conservation Act 2001 with a focus on the provisions of the National Electrical code (NEC-2011) and will try to provide the readers a better insight into the subject and thereby motivate the future electrical engineers to be more socially committed and environmentally concerned citizens.

With its coverage and approach, the book will be useful to the engineering students as well as practising engineers.

Salient features

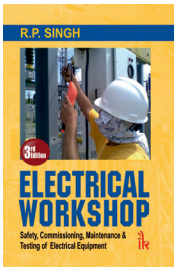
- Design assistance to electrical systems in residential, recreational, industrial premises, and exterior lighting.
- Design aspects for improving power factor and reducing impact of harmonics.
- Covers the regulatory and compliance framework,
- Electricity Act 2003 and National Electrical code-2011.
- Chapter on energy economics in system design comprising financial and tax aspects.
- Separate chapters on solar PV installation and emergency/standby generation installation.
- Diagrams, bulleted tips and solved problems to enhance learning.
- End-of-chapter Exercises for practice.

Contents:

Role of Statutes in Electrical Systems Design/Design Aspects of Electrical Systems/Principles of Lighting Design/Electrical Installations in Domestic Buildings/Industrial Installations/Cable Sizing and Voltage Drop Calculations/Exterior Lighting/Power Factor Improvement/Power Quality Issues and Resonance Problems in System Design/Energy Economics in System Design/Power System Earthing/Solar PV Systems For Household Applications/ Emergency and Standby Generation Appendix Bibliography./ Appendix/Bibliography/Index

Audience – B. Tech Elec.

Electrical Workshop



Third Edition

R.P. Singh

ISBN: 978-93-81141-20-5/Year 2012
Size 18 cm × 24 cm/Pages 342
Paperback/₹ 445.00

This book is divided in two sections. The first section covers basics of maintenance of electrical equipment, details of electrical safety, tools used during installation, maintenance and testing, earthing and underground cables. Details of the following make this book useful to the field engineers as well as teachers and students.

- Fundamentals of safety, installation, commissioning, maintenance and testing of electrical equipment
- Commissioning, maintenance and testing of power transformers, electric motors, and alternators
- Maintenance of DC batteries, DG sets, and substation equipment and transmission lines
- Automobile electrification
- Electrical wiring systems
- Indian electricity rules

The second section provides instruction sheets to reinforce theoretical instructions to the related experiments. The instruction sheets are the solutions to the practical difficulties, correlating the theory and practice. Step-by-step instructions for carrying out experiment along with relevant theory in brief is given. A set of relevant questions is given at the end of instruction sheets for each experiment.

Contents:

Section A – Theoretical Description/Maintenance of Electrical Equipment/Electrical Safety/Tools and Specifications of Electrical Materials and Appliances/Earthing/Underground Cables/ Maintenance of DC Batteries/Commissioning, Maintenance & Testing of Power Transformers/Commissioning, Maintenance & Testing of Electric Motors/Commissioning, Maintenance & Testing of Alternators/Maintenance of DG Sets/Maintenance of Substation Equipment & Transmission Lines/Automobile Electrification/ Electrical Wiring Systems/Indian Electricity Rules

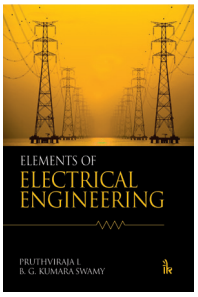
Section B – Experiments/Motivation/Guidelines for the Teachers/ Guidelines for the Students/Experiments/Index

Audience – B.E. and B. Tech students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Elements of Electrical Engineering



Pruthviraja L • B.G. Kumara Swamy

ISBN: 978-93-86768-00-1/Year 2017
Size 18 cm × 24 cm/Pages 532
Paperback/₹ 595.00

Elements of Electrical Engineering presents the fundamentals of electrical energy in a comprehensive manner to the undergraduate students of Electrical & Electronics Engineering.

Salient Features:

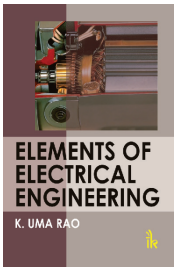
- Fundamentals of electrical energy in a comprehensive manner with illustrations, examples, step-by-step solution methods.
- Ohm's and Kirchhoff's laws, 3-phase ac system, single-phase transformers and their installation, network theorems applied to ac and dc circuits etc.
- Transient behavior of active and passive elements in ac and dc circuits, resonance and frequency tuning in ac circuits.

Contents:

DC Circuits/Single-Phase AC Circuits/Three-Phase Circuits/ Domestic Wiring and Measuring Instruments/DC Machines/ Transformers/Synchronous Generators/Three-Phase Induction Motors/Basic Circuits Analysis and Network Reduction Techniques/ Network Theorems for DC and AC Circuits/Transient Response Analysis/Resonance and Coupled Circuits/Two-Port Networks/ Appendix A Electrical Engineers Must Know This/Appendix B Derivation for Star-Delta Transformation/Appendix C Laplace Transform/Bibliography and References/Index

Audience – B.E. & B.Tech. students.

Elements of Electrical Engineering



K. Uma Rao

ISBN: 978-93-84588-21-2/Year 2015
Size 18 cm × 24 cm/Pages 240
Paperback/₹ 345.00

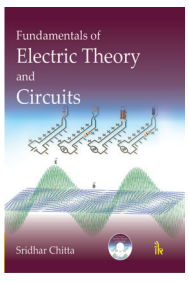
This book presents the concepts which form the foundation of Electrical Engineering. The book covers fundamentals of DC circuits, single-phase and three-phase AC circuits, electromagnetism, domestic wiring, basic instrumentation and protection schemes, and fundamentals of electrical machines. A number of examples have been included in each chapter, to illustrate the applications of the concepts. The book is amply illustrated to make the subject easily understandable.

Contents:

DC Circuits and Magnetics/Single-phase AC Circuits/Three-phase AC Circuits/Measuring Instruments/Wiring and Protection Devices /DC Machines/Transformers/Synchronous Generators/Three-phase Induction Motors/Index.

Audience –Audience – B.E. & B.Tech. Students.

Fundamentals of Electric Theory and Circuits



Sridhar Chitta

ISBN: 978-93-85909-46-7/Year 2018
Size 18 cm × 24 cm/Pages 808
Paperback/₹ 995.00

The book by Sridhar Chitta, where electrostatics and electric circuits are treated in a unified way on the basis of surface charges, is one of the rare exceptions in textbooks today… Chitta´s book offers the perfect content to deeply understand what they (students) want to and should learn…

— Dr Hermann Härtel,
Institute for Theoretical Physics and Astrophysics, University Kiel

This textbook gives an in-depth coverage of mechanisms of processes in electric and electronic circuits by taking an intuitive approach to a unified treatment of electrostatics and circuits. The book contains hundreds of illustrations accompanying the textual descriptions which make this book a comprehensive introductory undergraduate textbook on fundamentals of electromagnetic theory and circuits. With its approach and coverage, it will be an indispensable textbook for courses in basic electrical engineering, basic electronics, engineering physics, modern physics and circuit theory.

This book is accompanied with a CD-ROM which contains animated PowerPoint presentations for all the chapters including carefully selected links to animations and articles available on the Internet.

Salient Features:

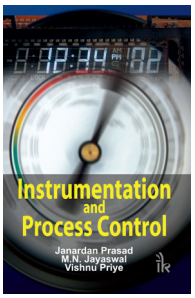
- Enhances analytical ability and reasoning skills in solving electric and electronic circuit problems.
- Conceptual electric and magnetic fields; surface charges and fields in conduction: and capacitor and inductor circuit operation.
- Surface and Hall effect charges in motor and generator operation.
- Fundamentals of radiation, antennas and waveguides.
- Use of illustrations to make the subject 'visual' enhances intuitive cognition.
- Summary and questions at the end of each chapter to test student understanding.

Contents:

Surface Charges and Conduction Processes/Capacitors in Circuits/ The Principle of Superposition in Circuit Processes/Electrical Energy/Faraday's Law and Transmission Line Fundamentals/ Magnetic Forces/Motional emf and Generators/Magnetic Moments, Motors and Loads/PN Junctions, Diodes and Ohmic Contacts/Wave Propagation, Antennas and Waveguides/Appendices/References/ Index

Audience – First and second year students of Electrical, Electronics and Communication, and Instrumentation Engineering; BSc/ MSc Electronics and Physics, Practicing Electrical and Electronics engineers.

Instrumentation and Process Control



Janardan Prasad • M.N. Jayaswal
Vishnu Priye

ISBN: 978-93-80026-57-2/Year 2010
Size 16 cm × 24 cm/Pages 400
Paperback/₹ 445.00

Instrumentation and control system is the heart of all processing industries. No process can run without the aid of instrumentation. Therefore, sometimes it is said that instruments are eyes of process through which a process operator visualizes the process behaviour.

Instrumentation and control concepts have undergone a drastic change over the past few years. The book is meant for the graduate level course of Instrumentation and Process Control (Electrical & Electronics and Instrumentation & Control disciplines). The topics have been divided in 8 chapters. The first three are devoted to Transducers. In these chapters, stress has been given on Transducer Signal Selection, Pneumatic Transmitters, Smart Transmitters, Special Class Thermocouple, Nucleonic Level Gage, Electronic Level Gage & others. In the chapter on telemetry, pneumatic transmissions have been added in addition to usual topics. In the chapter Process Control, three element control systems have been described through examples of Boiler Drum Level Control. And lastly in Recent Developments &

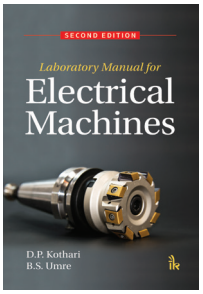
Microprocessor Based Instrumentation System, development of PLC and distributed control system and instrumentation communication protocol have been described in greater detail with suitable examples. The book is a perfect match of instruments that are still in use and which have been recently developed.

Contents:

Transducers-I/Transducers-II/Transducers-III/Telemetry/Signal Conditioning and Data Acquisition System/Process Control/Display Devices and Recorders/Microprocessor based Instrumentation System/Bibliography/Index

Audience – Postgraduate and undergraduate students of Electrical and Electronics Engineering.

Laboratory Manual for Electrical Machines



Second Edition

D. P. Kothari • B. S. Umre

ISBN: 978-93-85909-75-7/Year 2017
Size 16 cm × 24 cm/Pages 272
Paperback/₹ 425.00

Laboratory Manual for Electrical Machines (2nd) edition includes four new experiments in electrical machines so that it can cater to the complete syllabus of undergraduate laboratory courses of electrical machines. This book gives the basic information to the students with the machine phenomenon, working principles and testing methods, etc. It also imparts real physical understanding of various types of electrical machines. The main attraction of this laboratory manual is its power point presentation for all experiments.

This manual is meant for electrical engineering students of B.E. and B.Tech and polytechnics.

Salient Features:

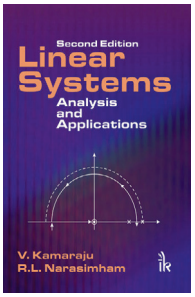
- Four new experiments.
- B-H Curve of a Magnetic Material, Kirchhoff's Laws, R-L-C Series Circuit, R-L-C Parallel Circuit are the new topics covered in the book.

Contents:

To Study the Speed Control of a DC Shunt Motor by (a) varying armature voltage with field current kept constant. (b) varying field current with armature voltage kept constant/To Perform Load Test on a DC Shunt Generator/To Perform Open Circuit and Short Circuit Test on a Single-Phase Transformer/ To Study (a) the Polarity Markings on Single-Phase Transformer Windings and (b) the Operation of an Autotransformer/To Study the Load Test on a Cumulatively Compounded DC Motor/To Study the Load Test on a Three-Phase Induction Motor/To Determine Voltage Regulation and Efficiency of a Single-Phase Transformer by Direct Loading/To Study the Scott-Connection of Transformers (Three-Phase to Two-Phase Conversion)/To Study the Variation of Speed and Load Test on Schrage Motor/To Plot V and Inverted V(Λ) Curves of a Synchronous Motor/To Determine the Ratio Xq/Xd for Three-Phase Alternator by using "Slip Test"/To Study the Synchronization of an Alternator with an Infinite Bus by "Dark Lamp Method"/To Determine Potier Reactance of Three-Phase Alternator by "Zero Power Factor Lagging Saturation Curve"/To Determine Negative Sequence and Zero Sequence Reactances of Synchronous Generator/To Study the Characteristics of Three-Phase Induction Generator/To Determine Direct Axis Subtransient (Xd"), Quadrature Axis Subtransient (Xq") Reactances of Synchronous Machine/Determination of B-H Curve of a Magnetic Material/To Study and Verify Kirchhoff's Laws Applied to Direct Current Circuits/To Study R-L-C Series Circuit/To Study R-L-C Parallel Circuit/Index

Audience – B.E., B.Tech. and Diploma students.

Linear Systems Analysis and Applications



Second Edition

V. Kamaraju • R.L. Narasimham

ISBN: 978-93-80026-71-8/Year 2009
Size 18 cm × 24 cm/Pages 512
Paperback/₹ 475.00

This book provides an up-to-date information on a number of important topics in Linear Systems.

Salient Features:

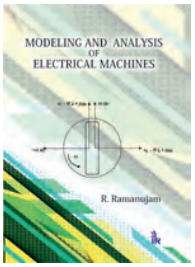
- Introduces discrete systems including Z-transformations in the analysis of Linear Systems including synthesis.
- Emphasis on Fourier series analysis and applications.
- Fourier transforms and its applications.
- Network functions and synthesis with Laplace transforms and applications.
- Introduction to discrete-time control system.
- Z-Transformations and its applications.
- State space analysis of continuous and discrete-time analysis.
- Discrete transform analysis.
- A large number of solved and unsolved problems, review questions, MCQs.

Contents:

Introduction to Signals and Systems/Fourier Series Analysis and Applications/Fourier Transforms and its Applications/Laplace Transforms and Applications/Synthesis of Passive Networks (Driving Point and Transfer Impedance Functions)/Variable Analysis of Continuous Time Systems/Introduction to Discrete-Time Control Systems/Discrete Systems Z–Transformations/State-Space Analysis of Discrete-Time Systems/Discrete Transform Analysis/Appendices/References/Index.

Audience – Students of Electrical/Electronics/Chemical/Instrumentation disciplines.

Modeling and Analysis of Electrical Machine



R. Ramanujam

ISBN: 978-93-84588-26-7/Year 2018
Size 18 cm × 24 cm/Pages 464
Paperback/₹ 495.00

This book will serve as a stepping stone for the undergraduate students in Electrical & Electronics Engineering for further specialization. It is a core subject in the curriculum for post-graduate Power Electronics and Power Systems Engineering disciplines offered by most of the universities and educational institutions.

The book starts with the fundamental concepts such as phasors and reference frames which are not usually elaborated at the undergraduate level thereby providing smooth transition to more advanced topics as specified in the various syllabi.

The topics covered in the book include:

- Definition and implications of phasors.
- Two-axis diagrams which demystify voltage and flux linkage equations.
- Theory and advantages of different reference frames.
- Analysis of detailed models of synchronous, induction, single-phase and dc machines.
- Linearized and reduced-order model analysis.

The book is also suitable for final semester undergraduate students and practising engineers will find this book a useful addition to their professional references.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400 info@ikinternational.com

Contents:

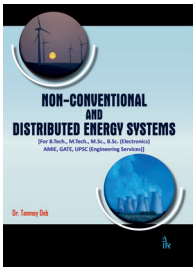
Basics of Rotating Electromagnetic Machines/ Transformation of Machine Variables Between Reference Frames/ Modeling and Analysis of Conventional Synchronous Machines/ Modeling and Analysis of Symmetrical Induction Machines/ Modeling and Analysis of AC Single-Phase Motors/ Linearized Models of Synchronous and Induction Machines/ Reduced-Order Models of Synchronous and Induction Machines/ Modeling and Analysis of Conventional Direct Current Machines/Index

Audience – Students of Electrical & Electronics Engineering, post-graduate Power Electronics and Power Systems Engineering.

Shelving – Electrical Engineering

Non-Non-conventional and Distributed Energy System

[For B.Tech., M.Tech., M.Sc., B.Sc. (Electronics) AMIE, GATE, UPSC (Engineering Services)]



Dr. Tanmoy Deb

ISBN: 978-93-90620-62-3/Year 2022
Size 18 cm × 24 cm/Pages 484
Paperback/₹ 475.00

All types of non-conventional sources of power, i.e., biomass, solar, wind, geothermal, ocean, fuel cell, MHO, thermoelectric, thermionic, piezoelectric, small hydro, hybrid power plants, energy storage technologies and distributed generation have been discussed in detail along with case studies. Environmental impact of these power plants has also been discussed.

This book is meant for students of B.Tech, M.Tech, B.Sc., M.Sc, AMIE and various competitive exams.

Salient Features:

- Covers syllabus of 25 universities and NITs.
- Each chapter provides an overview followed by construction, operation, analysis, equivalent circuit, etc., of power plants.
- It contains pedagogical features such as chapter summary, multiple-choice question bank, operating power plants in the world, sample question papers, case studies, etc., to enhance student centric learning.
- It contains 108 solved numerical problems, 56 unsolved numerical problems with answers, 402 figures and 117 tables to make subject matter easier to understand

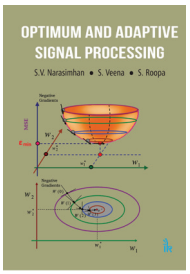
Contents:

Overview of Non-conventional energy/Biomass Energy system/ Wind energy system/Solar energy system/Geothermal energy system/Ocean based energy system/Fuel cell, MHD and Hydrogen energy systems/Thermoelectric, Thermionic, Piezoelectric and Thermonuclear Systems/Small Hydro/Co-ordinated Operation of Hybrid Power Plants/Energy Storage Systems/Distributed Generation Systems/Annexures/Bibliography/Index

Audience – Diploma (Engineering), B.Sc., AMIE, M.Sc., B.Tech, M.Tech, GATE and UPSC (Engineering Services)

Shelving – Mechanical Production & Industrial Engineering

Optimum and Adaptive Signal Processing



S.V. Narasimhan • S. Veena
S. Roopa

ISBN: 978-93-85909-59-7/Year 2017
Size 18 cm × 24 cm/Pages 1016
Paperback/₹ 1295.00

Optimum and Adaptive Signal Processing has been developed in a simple, logical and directed way. The ease of understanding is facilitated by providing all the intermediate steps in a mathematical expression derivation and its physical meaning, preserving the rigour and depth of the subject. Chapters 2 to 5, covering the background, make the book self-contained. The detailed treatment of both optimum and adaptive processing (unlike in some of the other books), enables enhanced understanding. Also, chapters 1-8 and 9-17, can cater as books on optimum signal processing and adaptive signal processing (for those with optimum signal processing background), respectively.

A CD containing MATLAB programs for most of the illustrations is provided.

Salient Features:

- The nonparametric estimation approach limitation, the trade-off between variance and frequency resolution presented emphasises the importance of optimum approach, for spectrum and bispectrum. A group delay approach that reduces this limitation for spectrum and recovers the system phase from bispectrum, are given.
- In the optimum approach for the AR modelling, warped versions of linear prediction, Burg and escalator predictor are covered. Among the ARMA methods, for the preferred simultaneous pole-zero modelling, its limitations and the necessary solutions required to overcome them, are dealt. The ARMA modelling by pole-zero decomposition in group delay domain and its use in different scenarios are indicated. Further, the bispectrum estimation via AR model is presented.
- Different versions of LMS adaptive algorithms, like, leaky, momentum, sign-sign, median, filtered input LMS (FX-LMS), Griffiths LMS and variable stepsize LMS; are dealt. A computationally efficient algorithm which uses both variable stepsize and variable gradient which are robust to white/colour observation noise and its transform domain version which further improves convergence rate, are addressed. Compared to forward error LMS, the forward-backward error LMS algorithm which reduces the misadjustment by 6 dB both in time and transform domain and also its warped version; are considered. Also, a bispectrum based LMS adaptive algorithm for nonminimum phase system identification, is presented.
- Computationally efficient Joint Laguerre escalator lattice adaptive algorithm appropriate for nonstationary signals, the lattice and cascade predictors which have a faster convergence; are presented. Computationally efficient Frequency domain partitioned block LMS approach and its delayless version; are dealt.
- The conjugate gradient (CG) method for the adaptive filter which uses single CG iteration for every sample both in time and transform domain; are dealt.
- In delayless subband/wavelet transform domain adaptive approach, the trade-off between aliasing and eigenvalue spread and the complex weight transform; which are solved by using DCT harmonic wavelet transform, is covered.
- For IIR equation error adaptive filters, the bias for the colour observation noise is removed by estimating the system output and using it as input to the adaptive filter which estimates the denominator polynomial, known as bias freen approach and its extension to. Steiglitz-Mc bride method; are introduced. An adaptive notch filter realized by Steiglitz-Mc bride approach using variable stepsize LMS algorithm is also introduced. The Recursive Least Square (RLS) algorithm and its fast transversal and lattice versions; are derived in detail. Also the affine projection and Kalman filter, are briefly treated.
- The nonlinear adaptive filters based on back propagation neural network and on 2nd order Volterra series realized by transversal, lattice structures and by transform approach; are given. Further, the applications of adaptive filter for communication, audio, speech and acoustics; biomedical signals and Inverse control; are presented.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

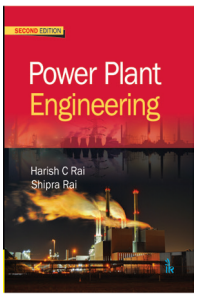
Contents:

Introduction/Signal Approximation: The Fourier Transform/Signal Transmission and Power Spectral Density/Sampling Theorem and Discrete Fourier Transform/Random Signal Theory/Non-parametric Spectral Estimation/Parametric Spectral Estimation/Parametric Approach in Its General form - The Wiener Filter/Iterative Solution to Normal Equations: Method of Steepest Descent/Least Mean Square (LMS) Algorithm/Orthogonalization Based Least Mean Square Algorithm/Subband and Wavelet Adaptive Filters/Adaptive Infinite Impulse Response (IIR) Filters/Block /Frequency Domain LMS Algorithm/Recursive Least Square Adaptive Filters/Nonlinear Adaptive Filters/Applications of Adaptive Filters

Audience – Undergraduate and Postgraduate students in Electronics, Instrumentation and Communication Engineering. Will be useful reference for research levels and also by industrial professionals in engineering and science.

Power Plant Engineering

Second Edition



Harish C. Rai

ISBN: 978-93-85909-77-1/Year 2017
Size 18 cm × 24 cm/Pages 434
Paperback/₹ 525.00

The second edition of the book proceeds to cover power plants that rely on renewable energy sources, such as geothermal, solar, wind, ocean and tide and wave energy. It terminates with the presentation of various energy storage systems, most of which are still under development and environmental aspects of electric power generation, both fossil and nuclear. All power production plants, invariably, pollute the atmosphere and the resulting imbalance on ecology has bad effect.

Power Plant Engineering is the outcome of the author's teaching the same subject to engineering students for the last 19 years. It discusses all types of power plants in entirety, detailing each one's merits and demerits, their engineering and technical aspects like the equipment required, working of the plant, scientific principles involved, their physical location, environmental hazards involved, and so on. Due emphasis has also been given to the management of waste generated by power plants, e.g. fly ash.

Apart from technical and engineering aspects, it also discusses the economics part of power plants, recent developments in the methods of power generation, and prospects for solar and magneto-hydrodynamics power generation. Numerical problems, multiple choice questions and a review exercise is also appended at the end of each chapter.

This book is useful for the students and teachers of electrical and mechanical engineering.

Salient Features:

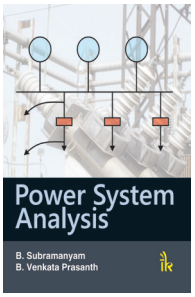
- The book covers all the conventional and non-conventional power plant engineering including thermal, hydro, nuclear, gas, diesel, wind, solar, geothermal and so on.
- Has specific chapters on various sources of power, trends in production and economic aspects.
- New edition includes a new Chapter on Environmental Aspects of Power Generation.
- Expansion of Updated matter for Chapter 1 and 2 and text is supported with simple and self-explanatory figures.
- Contains solved examples, review exercises and objective type questions in the chapter.

Contents:

Introduction/Thermal Power Station/Steam Turbines and Ash Handling/Hydroelectric Plants/Nuclear Power Plants/Diesel Power Plant/Gas Turbine Plant/Combined Working of Power Plant/Major Electrical Equipment in Power Stations/Protective Devices for Power Plants/Economic Loading of Power Stations/Power Plant Economics/ Recent Development ((Wind, Geothermal and Tidal)/Solar and MHD Power Generation/Environmental Aspects of Power Generation/

Audience – B.E. and B.Tech (Electrical and Mechanical Engineering)

Power System Analysis



B. Subramanyam
B. Venkata Prasanth

ISBN: 978-93-81141-62-5/Year 2012
Size 18 cm × 24 cm/Pages 300
Paperback/₹ 495.00

This book has been designed as a basic text for undergraduate students of Electrical & Electronics Engineering. It provides a thorough understanding of the basic principles and techniques of power system analysis as well as their applications to real-world problems.

Each chapter functions as a stand-alone guide to a critical topic. Most of the important topics of power system analysis are covered in this book. Beginning with the basic concepts, the book gives an exhaustive coverage of topological analysis of power networks, bus impedance algorithm, short circuit studies, power flow studies and stability analysis.

Students opting for competitive exams like GATE, UPSC, NTPC and NHPC and TRANSCO, etc., will be very much benefited as a large number of solved numerical problems selected from GATE, UPSC and other university examinations are appended at the end of each chapter.

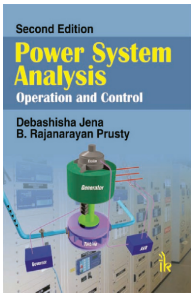
Contents:

Per Unit System/Power System Network Matrices-I/Power System Network Matrices-II/Power System Load Flow Studies/Symmetrical Fault Analysis/Unsymmetrical Fault Analysis/Power System Steady State Stability/Transient Stability Analysis of Power System/Index.

Audience – Students of Electrical and Electronics Engineering, and competitive examinations like GATE, UPSC, etc.

Power System Analysis Operation and Control

Second Edition



Debashisha Jena
B. Rajanarayan Prusty

ISBN: 978-93-82332-95-4/Year 2014
Size 18 cm × 24 cm/Pages 384
Paperback/₹ 505.00

Power System Analysis: Operation and Control is designed to serve as a basic text for B.Tech. and M.Tech. students of Electrical Engineering. The topics are explained in a clear and systematic manner. The book has a wealth of useful figures, graphs and block diagrams to help students. A number of conceptual deliberations have been included to offer more comprehensive understanding of different topics. Many solved problems have been included to clarify the theoretical concepts and illustrate good problem solving methodologies. Extensive short questions and answers are given at the end of each chapter to enable the student to prepare for the examinations systematically. Objective type multiple choice questions are included at the end of each chapter to enable the student to build a clear understanding of the subject matter discussed in the text. MATLAB programming code is developed extensively for important power system analyses and solution of complex problems

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

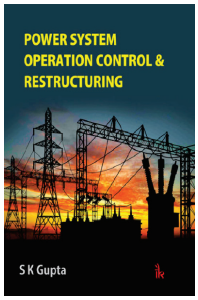
which will help the students to try out more problems as well as encourage students to modify and develop their own coding.

Contents:

Overview of power system/Basic principles/Per-unit system/Line parameter calculation/Transmission line model and performance/ Fault analysis/Transmission capacity/Compensation techniques/ Load flow analysis/Economic operation of power system/Power system controls/Power system stability/FACTS controllers

Audience – Undergraduate and postgraduate students of Electrical & Electronics Engineering.

Power System Operating Control & Restructuring



S. K. Gupta

ISBN: 978-93-82332-98-5/Year 2015
Size 18 cm × 24 cm/Pages 916
Paperback/₹ 695.00

This book provides a thorough understanding of the fundamentals of the subjects and their applications, including modeling, analyzing the problem of stability, operation of the power system and problems associated with restructured power systems.

With its coverage and focus, this book will meet the needs of the students of the various UG and PG power systems engineering courses. It will also serve as a useful reference resource for researchers and practising engineers.

Salient Highlights:

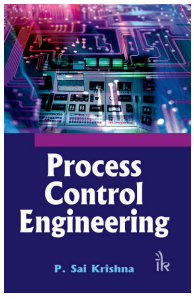
- A large number of solved problems and unsolved exercises accompanying theory, for better comprehension.
- Inclusion of MATLAB M-files and SIMULINK appropriately in numerical examples, for assisting the analysis.
- A dedicated chapter on supervisory control and data acquisition (SCADA), for proper emphasis on this important topic.
- A section on engineering challenges encountered in restructuring of interconnected power systems, for a real-world application.
- A good coverage of the regulatory and legal framework, for giving a good understanding of the compliance aspects of power systems.

Contents:

Introduction/Load Flow Analysis/Optimal Load Dispatch/ Short Circuit Studies/Modeling/Supervisory Control and Data Acquisition/Restructuring Power System/Automatic Generation Control/Power System Stability/Excitation, Voltage Stability and Control/Load Frequency Control under Deregulation Environment/ Extra High Voltage Transmission and FACTS/The laws, challenges and issues in Competitive Market/Bibliography/Index

Audience – BE & B. Tech and ME & M. Tech electrical engineering students.

Process Control Engineering

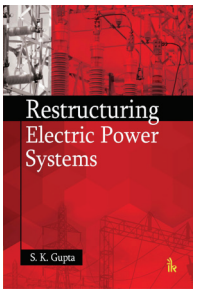


P. Sai Krishna

ISBN: 978-93-80026-39-8/Year 2010
Size 16 cm × 24 cm/Pages 264
Paperback/₹ 355.00

(See on page 78)

Restructuring Electric Power Systems



S.K. Gupta

ISBN: 978-93-86768-05-6/Year 2018
Size 18 cm x 24 cm/Pages 480
Hardback/₹ 1295.00

Restructuring Electric Power System provides a thorough understanding of the technology involved in this very recent advance field. Electricity is a commodity with several features that distinguish it from other goods and services. It cannot be stored and its instant transmission requires a network of wires. A prerequisite for ensuring orderly transportation of electricity under new regulatory environment is the creation of an independent entity that would channelize and control its flow in an optimum manner and without any discrimination, just as a traffic policeman or air traffic controller does in respect of traffic flowing to and from several directions. This causes several issues which are dealt with in this book systematically. This book shall be useful as text/reference to field engineers, undergraduate, postgraduate students and the research scholars working in this field. MATLAB M-files and SIMULINK have been included in some of the numerical examples to assist the analysis. The book includes topics power flow analysis, power trading, restructured market, market forces and transmission issues, ATC, congestion management, AGC and ancillary services.

Please collect author's another book TRUE MANAGEMENT as complimentary copy with this book. The book on true management is against the social obligation of the author towards the society. Therefore, the cost of TRUE MANAGEMENT book is not embedded in the price of this book and is therefore provided free of cost.

Salient Features:

- Aims on how to handle various issues and challenges for providing reliable, secure, economical power to consumers and ancillary services to the system under restructured environment.
- Power flow analysis, power trading, restructured market, market forces and transmission issues, ATC, congestion management, AGC and ancillary services, etc., are the topics covered in the book.
- MATLAB M-files and SIMULINK have been included in some numerical examples to assist the analysis.

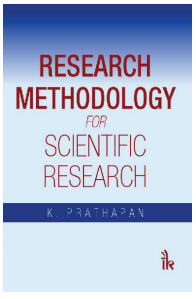
Contents:

Introduction/Load Flow Studies/Restructured Market/Power Trading/Market Power And Transmission Pricing/Ancillary Services Management/ATC/Congestion Management/Load Frequency Control Under Deregulated Environment/

Audience – Undergraduate, postgraduate students, research scholars, practitioner, and teachers.

Research Methodology

For Scientific Research



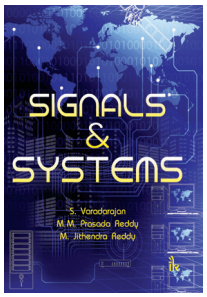
K. Prathapan

ISBN: 978-93-82332-85-5/Year 2014
Size 16 cm × 24 cm/Pages 280
Paperback/₹ 355

(See on page 279)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Signals and Systems



S Varadarajan
M.M. Prasada Reddy
M. Jithendra Reddy

ISBN: 978-93-84588-40-3/Year 2016
Size 18 cm × 24 cm/Pages 728
Paperback/₹ 695.00

The understanding of signals and systems is a prerequisite to learning digital signal processing and communication systems. This book presents concepts of signals & systems using a large number of well-designed and illustrative solved problems. The book is suitable for a one-semester undergraduate level course in Signals and Systems, for students in Electronics and Communication, Electrical and Electronics and Computer Engineering programs, as well as Information Technology courses. The book is also valuable for post-graduate students and practising engineers for reviewing the basics of signals and systems. It covers topics ranging from introduction to signals and systems, continuous-time (CT) signals and systems, analysis of linear and time-invariant systems, continuous-time Fourier series, continuous-time Fourier transform, sampling, Laplace transform and Z transform. MATLAB codes for all the chapters are given along with a brief introduction.

Salient Features:

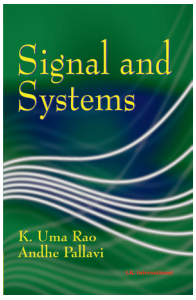
- Precise and easy-to-understand presentation of the subject, with the help of a large number of solved problems.
- Plenty of MATLAB programs included at the end of each chapter
- Additional exercises at the end of each chapter to allow the students to practice further.
- Thorough coverage of the subject from the basics to practical aspects.
- Separate chapters on 'Sampling' & 'Convolution and Correlation'

Contents:

Introduction to signals and systems/Fourier series representation/ Fourier transform/LTI system/Sampling/Convolution and correlation/Laplace transform/Z transform/Appendix: Matlab commands/Index

Audience – B.Tech students of Electronics, Communication, Instrumentation, Computer Science, Electrical and Biomedical Engineering; M. Tech students of Signals & Systems/DSP and IT professionals

Signals and Systems



K. Uma Rao
Andhe Pallavi

ISBN: 978-81-89866-89-1/Year 2008
Size 16 cm × 24 cm/Pages 564
Paperback/₹ 545.00

Signals and Systems, is meant for undergraduate students of all Electrical Sciences, who deal with the subject in various semesters. The order of presentation of the subject is very systematic and simplified.

- Unlike most books, the introduction to Signals and to Systems has been dealt with in two separate chapters, to enable the student to clearly understand the properties of the signals and properties of the systems.
- Each chapter has over 50 solved problems. The problems have been divided in various sub-headings in each chapter, and solved in various sub-sections.
- Matlab programs when included in each chapter, lead to confusion, especially, in UG students. Hence, a separate chapter has been included on matlab.

Contents:

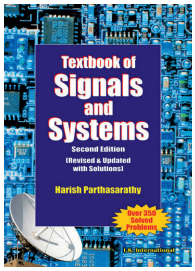
Introduction to Signals/Introduction to Systems/Time Domain Representation of LTI Systems – Continuous Time/Time Domain Representation of LTI Systems – Discrete Time/Fourier Representation of Periodic Signals (FS & DTFS)/Fourier Transform (FT & DTFT)/ Application of Fourier Representations/The Z –Transforms/Laplace Transforms/Signal Processing with MATLAB/Index.

Audience – UG students of Electrical Sciences.

Textbook of Signals and Systems

Second Edition

Harish Parthasarathy

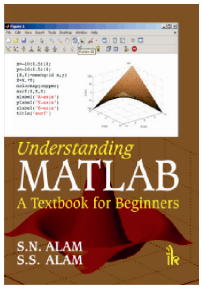


ISBN: 978-81-88237-19-7/Year 2006
Size 16 cm × 24 cm/Pages 382
Paperback/₹ 445.00

(See on page 80)

Understanding MATLAB A Textbook for Beginners

S.N. Alam • S.S. Alam

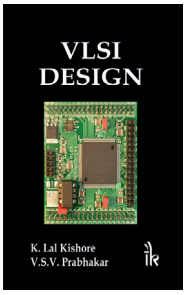


ISBN: 978-93-82332-33-6/Year 2013
Size 18 cm × 24 cm/Pages 328
Paperback /₹ 645.00

(See on page 50)

VLSI Design

K. Lal Kishore
V.S.V. Prabhakar



ISBN: 978-93-80026-67-1/Year 2009
Size 18 cm × 24 cm/ Pages 416
Paperback/₹ 445.00

(See on page 80)

Wireless Communication Systems

Rajeshwar Dass



ISBN: 978-93-81141-97-7/Year 2013
Size 16 cm × 24 cm/Pages 200
Paperback/₹ 325.00

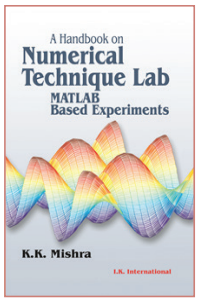
(See on page 80)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

A Handbook on Numerical Technique Lab

(MATLAB Based Experiments)



K.K. Mishra

ISBN: 978-81-89866-43-3/Year 2007
Size 14 cm × 21 cm/Pages 136
Paperback/₹ 295.00

This book will be very useful for the students to understand the software MATLAB and its applications in solving mathematical problems. This book has two sections. Section A gives a brief concept about the software MATLAB, and section B covers many experiments (examples). At the end of the book, a quiz has also been included.

Contents:

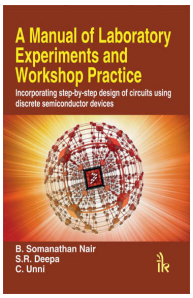
Section 'A': Introduction

Section 'B': A. Basic Mathematics/B. Calculus/C. Application/ D. Additional/Appendix.

Audience – Students of Electrical and Electronics Engineering.

A Manual of Laboratory Experiments and Workshop Practice

Incorporating step-by-step design of circuits using discrete semiconductor devices



B. Somanathan Nair
S. R. Deepa C. Unni

ISBN: 978-93-81141-23-6/Year 2011
Size 18 cm × 24 cm/Pages 312
Paperback/₹ 355.00

This book is designed as a laboratory-cum-workshop manual to cater the needs of the students of B.Tech. and B.E. degree courses in the various branches of engineering such as Electrical and Electronics Engineering, and Electronics and Communication Engineering. It can also be used for the undergraduate and postgraduate degree courses in Electronics and Physics.

There are no books similar in nature to this manual. This is the only book of this nature which describes practical design of electronics circuits and experiments that will work in the lab.

Salient Features:

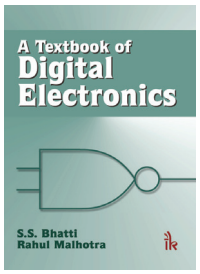
- Over 250 figures and circuit diagrams.
- Practical design of over 70 circuits described.
- 330 Viva-Voce Questions and Answers.
- Step-by step approach to designs so that component selection in highly systematic and logical.
- Brief theoretical explanation of each circuit.
- All designs using BJTs are based on only one transistor: BC 107.
- Experiments are described in an orderly fashion.
- Possible cause of faults and their remedies are suggested.

Contents:

General Procedures Used in Experiments/V-I Characteristics of Electronic Devices/Rectifier Circuits/R-C Coupled Amplifiers/Negative-Feedback Amplifiers/Sinusoidal Oscillators/Wave-Shaping Circuits/ Multivibrators/Voltage Sweep Generators/Direct-Coupled (DC) Amplifiers/The Cascode, Tuned and Power Amplifiers/Instruments Used for Electronic Experiments/Soldering Practice/Selected Viva-Voce Questions and Answers on Semiconductor Devices and Circuits/ Appendix A 291/Appendix B 293/Index

Audience – B. Tech. and B.E. in Electrical and Electronics Engineering, Electronics and Communication Engineering.

A Textbook of Digital Electronics



S.S. Bhatti • Rahul Malhotra

ISBN: 978-93-81141-51-9/Year 2012
Size 18 cm × 24 cm/Pages 270
Paperback/₹ 395.00

Digital electronics is an interdisciplinary subject of electronics, electrical, infor-mation technology, computer science engineering and sciences domain. The book provides a comprehensive coverage of the fundamental aspects of digital electronics. It not only explores the theoretical and practical aspects of digital circuitry, but also gives a glimpse of experience and classroom interaction of the authors.

Besides, the step-by-step methods to solve the digital system problems, it also includes the shortcut methods to digital approach for job interviews and competitive examinations.

Contents:

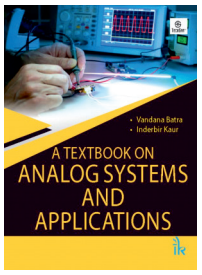
Number Systems and Conversions/Arithmetic of Number Systems/ Binary Codes/Introduction to Logic Circuits/Logic Families/ Karnaugh Maps/Sequential Logic Circuits/Shift Registers/ Combinational Logic Circuits/D/A and A/D Converters/ Semiconductor Memories/Introduction to Microprocessors/Index

Audience – Students of BE, B.Tech. (Electronics and Electrical Engineering, Computer Science and Information Technology), B.Sc. (Electronics), M.Sc. (Computer Science/IT), M.Sc. (Electronics), BCA, MCA, PGDCA and PGDIT.

A Textbook on Analog Systems and Applications

Second Edition

Forthcoming



Dr. Vandana Batra
Dr. Inderbir Kaur

ISBN: 978-93-90620-42-5/Year 2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

This book covers all the aspects of analog systems and their applications. This book will help students to understand "how and why" some particular semiconductor compounds are used in various applications and why they are called the backbone of the electronics industry along with the applications of basic linear integrated circuits.

The book, divided into 15 chapters, starts with the concepts of formation energy bands in solids and semiconductors followed by the applications of two terminal devices. Separate chapters on bipolar junction transistors, their configurations, various biasing techniques and stabilization circuits. The feedback amplifiers and oscillators using BJT, and linear and non-linear applications amplifiers are also covered.

Salient Features:

- Systematically builds up the basic concepts and circuit analysis using appropriate mathematical treatment
- Solved examples and exercises
- Concepts, theory, working and applications of basic linear integrated circuits

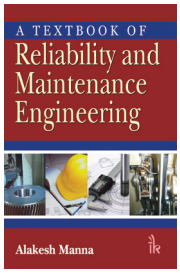
Contents:

Introduction to Semiconductors/Semiconductor Diode/Two-Terminal Devices/Three-Terminal Device: Bipolar Junction transistor/ Stabilization Circuits/Biasing circuits and Amplification/Multistage Amplifier/Feedback in Amplifiers/Oscillators/Operational Amplifier/Operational amplifier Characteristics/Closed loop op amp Configurations/Applications of Op Amp/Signal Generation using Op Amp/Op Amp as Filters/Conversion Network/Index

Audience – B.Sc.and B.Tech.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

A Textbook of Reliability and Maintenance Engineering



Alakesh Manna

ISBN: 978-93-80578-92-7/Year 2011
Size 18 cm × 24 cm/Pages 420
Paperback/₹ 545.00

This book has been prepared as per the syllabuses of various technical universities for their BE and ME courses. This book also fulfils the requirements of the university and college teachers, engineers, technical supervisors and other related staff in the industry.

The book covers:

- Traditional and modern concepts, importance, functions and various aspects of Maintenance Engineering
- Corrosions
- Organizational Setup and Record Keeping
- Safety measurers
- Housekeeping
- Reliability and availability of engineering systems
- Computerized maintenance information systems
- Total productive maintenance
- Maintenance aspects
- Inspection and testing
- Assets management; lean maintenance and application of different techniques in maintenance
- Manpower planning and training
- Fault diagnosis and condition monitoring
- Spare parts management and quality control
- Budgets and cost aspect of maintenance
- Maintenance effectiveness, performance appraisal and audit
- Maintenance of mechanical, electrical, process and service equipment
- Machine failure; development of preventive maintenance schedule, breakdown time distribution and troubleshooting.

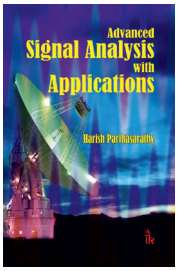
With all these and more features the book will surely fulfil the demands and needs of Maintenance Engineers and students.

Contents:

Concept of Maintenance Engineering/Organizational Setup and Record Keeping/Corrosion/Safety in Maintenance/Housekeeping Practice in Maintenance/Incentive Payments for Maintenance Workers/Reliability and Availability of Engineering Systems/Computerized Maintenance Information Systems/Total Productive Maintenance/Maintenance Aspect: Lubrications/Inspection and Testing in Maintenance Engineering/Assets Management, Lean Maintenance and Application of Different Techniques in Maintenance/Manpower Planning and Training/Fault Diagnosis and Condition Monitoring/Spare Parts Management and Quality Control in Maintenance/Budgets and Cost Aspect of Maintenance/Maintenance Effectiveness, Performance Evaluation and Audit/Maintenance of Mechanical, Electrical, Process and Service Equipment/Machine Failure, Development of Preventive Maintenance Schedule, Breakdown Time Distribution and Troubleshooting/Bibliography/Index.

Audience – Students of BE, ME, Teachers, Engineers, Technical Supervisors.

Advanced Signal Analysis with Applications

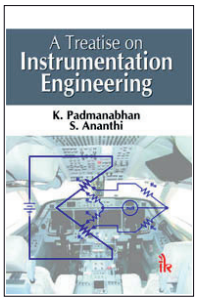


Harish Parthasarathy

ISBN: 978-93-81141-09-0/Year 2011
Size 22 cm × 28 cm/Pages 420
Hardback/₹ 1095.00

(See on page 68)

A Treatise on Instrumentation Engineering



K. Padmanabhan • S. Ananthi

ISBN: 978-93-81141-03-8/Year 2011
Size 16 cm × 24 cm/Pages 776
Paperback/₹ 745.00

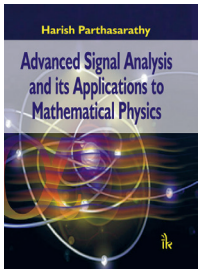
This book covers the whole groundwork for a consummate course on Instrumentation Engineering. Dealing with all types of instruments, methods of instrumentation, signal processing as well as sensors of every kind—electrical, electronic, photonic and also mechanical. The book is provided with lucid explanations of the topics with a large number of illustrations. There are worked examples embedded in the chapters and there are meaningful exercises for testing one's study. The several chapters cover the subject and that includes the computer based instrumentation interfaces also. As such, having all these together in one volume will go a long way to meet the requirements of the candidates learning this subject nowadays.

Contents:

Measurement Systems/Operational Amplifiers and Analog Signal Conditioning/Noise: Its Properties and Methods of Elimination/DC Bridges and Measurements/AC Null Measurements/Survey of Transducer Mechanisms: Transducers for Measurement/Mechanical, Chemical and Process Instrumentation/Electrical and Electronic Measuring Instruments/Signal Processing Techniques Applied for Instrumentation/Digital Interfacing Standards/Index

Audience – Instrumentation Engineering Students.

Advanced Signal Analysis and its Applications to Mathematical Physics

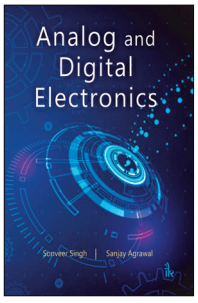


Harish Parthasarathy

ISBN: 978-93-80026-54-1/Year 2009
Size 21 cm × 28 cm/Pages 712
Hardback/₹ 1995.00

(See on page 66)

Analog and Digital Electronics



Sonveer Singh
Sanjay Agrawal

ISBN: 978-93-86768-57-5/Year 2019
Size: 18 cm × 24 cm/Pages 638
Paperback/₹ 525.00

The study of Analog and Digital electronics is essential for students pursuing degrees in electrical, electronics, computer science, or information technology. Analog and Digital electronics are found in a broad range of applications within these disciplines, from analog circuit design to digital circuit design and analysis. This book deals with the theory and practices of Analog and Digital electronics. It starts with basics of electronics and goes on to discuss special types of Diodes, BJT and FET transistors, Amplifiers, and finally ends up with the coverage of Oscillators and Power in Digital circuits. This book strictly follows most of the syllabus of analog and digital electronics without sacrificing the basic principles and depth of the subject.

Salient Features:

- Better understanding of concepts and basic principles.
- Fundamentals explained in a simple way.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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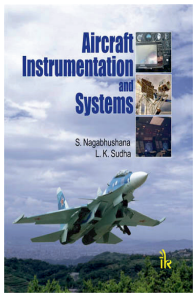
- Simple, systematic and stepwise procedure to solve problems.
- More than 100 solved problems; most of these problems have appeared in various universities and competitive examinations.
- Objective type questions with answers.

Contents:

Introduction to Electronics/Semiconductor Physics/Special Types of Diode/Bipolar Junction Transistor/Transistor Biasing and Stabilization of Operating Point/Field Effect Transistor/Frequency Response of BJT and JFET/Feedback Amplifiers/Oscillators/ Combinational Logic Circuits/Sequential Logic Circuits and Systems/ Applications of Operational Amplifier/Memories/Energy and Power in Digital Circuits/Index

Audience – BE & BTech student.

Aircraft Instrumentation and Systems

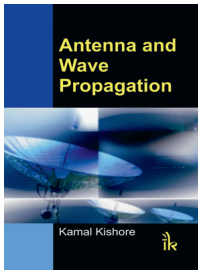


S. Nagabhushana • L.K. Sudha

ISBN: 978-93-80578-35-4/Year 2010
Size 24 cm × 18 cm/Pages: 410
Hardback/₹ 1295.00

(See on page 83)

Antenna and Wave Propagation



Kamal Kishore

ISBN: 978-93-80026-06-0/Year 2009
Size 16 cm × 24 cm/Pages 288
Paperback/₹ 325.00

The aim of this book is to give an introduction to the fundamental principles of antennas and wave propagation. Unlike other books available there is more emphasis on mathematical explanation in addition to physical understanding. Physical principles are explained in detail with neat diagrams to support the theory.

Spread in 8 chapters the book deals with:

Brief introduction to electromagnetic waves/Physical understanding of radiation mechanism/Parameters associated with antenna, directivity, gain, radiation pattern etc./Various types of antenna including dipole, linear antenna antenna arrays and aperture antennas./Physical mechanism of various types of propagations processes

Contents:

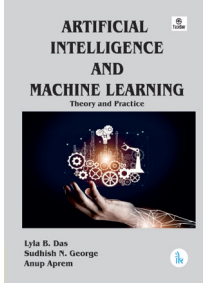
Review of Electromagnetic Waves/Physical Concept of Radiation/ Antenna Fundamentals/Linear Wire Antennas/Antenna Arrays/ Aperture Antennas/Ground Wave Propagation/Ionospheric Propagation/Bibliography/Index.

Audience – UG Electronics and Physics courses.

Artificial Intelligence and Machine Learning

Theory and Practice

New



Lyla B. Das
Sudhish N. George
Anup Aprem

ISBN:978-93-90620-09-8/Year 2023
Size: 18 cm × 24 cm/Pages 580
Paperback/₹ 695.00

This book is designed for undergraduates, postgraduates and professionals who want to have a firm grip on the fundamental principles of AI and ML.

Artificial Intelligence (AI) is a broad area of knowledge which has percolated into every aspect of human life. 'Machine Learning algorithms' are considered to be a subset of AI Theory, mathematics and coding are three aspects to any topic in AI. This book covers the most relevant topics in the field of Artificial Intelligence and Machine Learning (ML).

The subdivisions of Machine Learning are Supervised, Unsupervised and Reinforcement learning. All three are covered in sufficient depth. One very important and upcoming field of application is Natural Language Processing (NLP). A whole section of the book has been devoted to this.

The book covers the conceptual, mathematical and numerical analysis of the important ML algorithms and their practical applications. The topics covered include AI search algorithms, Classical machine learning, Deep learning theory and popular networks, Natural Language Processing (NLP) and Reinforcement learning. Numerical examples and lucid explanations give the reader an easy entry into the world of AI and ML.

Salient Features:

- Clear and lucid explanations of concepts with in-depth analysis
- Numerical examples to ensure clear understanding
- Critical evaluation of latest applications
- Inclusion of coding
- Elaborate coverage of Deep Learning Networks such as CNN, RNN and GAN
- Step by step coverage of NLP processes and applications
- Exclusive chapter on Attention mechanisms and Transformers
- Extensive coverage of Reinforcement Learning algorithms

Content:

Part I: Introduction, Classical ML, Mathematical Foundations and AI Search Algorithms

Artificial Intelligence (AI) and Machine Learning (ML): An Introduction/The Machine Learning (ML) Process/Classical Machine Learning Algorithms-I/Classical Machine Learning Algorithms-II/Bayesian Classifier/Parametric and Non-Parametric Estimation Techniques/Unsupervised Learning & Clustering/Dimensionality Reduction Techniques/Search Algorithms in AI

Part II: Deep Learning

Deep Learning Basics: Artificial Neural Networks, Backpropagation and Further Optimizations/Convolutional Neural Network (CNN)/ Sequence Modeling: RNN, LSTM, GRU/Generative Adversarial Network (GAN)

Part III: Natural Language Processing (NLP)

Introduction to Natural Language Processing and Text Pre-processing/ Statistical Language Models/Frequency Based Methods/Prediction Based Methods for Word Embeddings: Word2vec/Applications of NLP Using Deep Learning Techniques

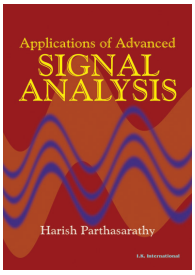
Part IV: Reinforcement learning

Reinforcement Learning: Introduction, Motivation and Brief History/ Markov Decision Process/Reinforcement Learning: Monte Carlo and Temporal Difference Methods/Reinforcement Learning: Policy Gradient Methods/Partially Observable Markov Decision Process (POMDP)/Appendix A: Linear Algebra/Appendix B: Python Programming/Bibliography/Index

Audience – Undergraduates, Postgraduate and Professional of AI and ML

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Applications of Advanced Signal Analysis



Harish Parthasarathy

ISBN: 978-81-89866-85-3/Year 2008
Size 21.5 cm × 28 cm/Pages 826
Hardback/₹ 1995.00

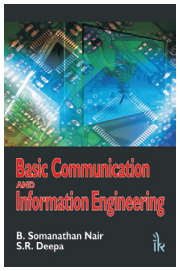
The mathematical tools used in signal analysis involve differential and difference equations, integral equations, matrix algebra and calculus, complex analysis and probability theory and random processes. This book applies these tools to problems in various branches of physics like fluid dynamics, electromagnetism and quantum theory. The book will be of use to research workers in signal processing as well as to research workers in physics and applied mathematics. Partial differential equations have been introduced here as an additional tool in signal analysis since they are used to describe quantum, electromagnetic and fluid dynamical phenomena not to forget Einstein's equations of gravitation. The book will be of use to signal processing experts who are interested in developing tools for the analysis of signals arising in real systems.

Contents:

Signal Theory/Linear Algebra and Group Theory/Quantum Mechanics/Electromagnetism and Relatively Theory/Circuit Theory/Mechanics/Fluid Dynamics/Probability Theory and Statistics/Information Theory/Partial Differential Equation/Gravitation/General Topology and Functional Analysis/Index.

Audience – Signal Processing Experts.

Basic Communication and Information Engineering



B. Somanathan Nair
S.R. Deepa

ISBN: 978-93-80026-62-6/Year 2009
Size 24 cm × 18 cm/Pages 352
Paperback/₹ 395.00

The present book is meant for the first-year students of various universities. Engineering educationists feel that first-year students of all disciplines must have an elementary and general idea about various branches of electronics. Spread in sixteen chapters, the book broadly discusses:

NPN and PNP transistors; Principles of amplifiers and oscillators; Principles of analog integrated circuits; Fabrications of ICs; Radio communication; Radar and navigational aids; Optical communication; Data communication principles; Internet Technology; Construction, and principles of operation of junction; Theory of electronic oscillators; Digital integrated circuits; Electronic measuring instruments and systems; Principles of colour television; Satellite communication systems; Computer architecture; Mobile communication.

Salient Features:

- 300 figures to support various explanations
- 315 short-answer questions/Numerical problems with answers
- 590 one-word questions (with answers)/125 review questions

Contents:

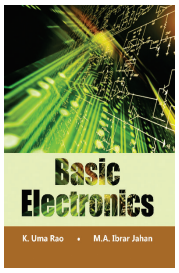
MODULE 1: Bipolar Junction Transistors/Field-Effect Transistors/Amplifiers and Oscillators/Integrated Circuits/Digital Integrated Circuits/Integrated-Circuit Fabrication

MODULE 2: Measurements/Radio Communication/Color Television/Radar and Navigation /Satellite Communication/Optical Communication

MODULE 3: Computer Architecture/Data Communication/Mobile Telephony/Internet Technology/Appendices/Index.

Audience – Electronics communication Engineering.

Basic Electronics



K. Uma Rao • M.A. Ibrar Jahan

ISBN: 978-93-84588-20-5/Year 2015
Size 18 cm × 24 cm/Pages 312
Paperback/₹ 425.00

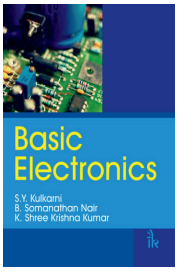
This book presents the basic concepts of electronic devices and circuits in a simple manner. A number of design and analytic numerical problems have been included to help the student understand the application of the concepts clearly. The main topics covered in the book include semiconductor diodes and their application in rectifiers and voltage regulators; transistors, their configurations and application in amplifier and oscillator circuits; Operational amplifiers and their applications; number systems and fundamentals of analog communication circuits and basic transducers. The book will be useful for the first year course in Engineering.

Contents:

Semiconductor diode and its applications/Transistors/Operational amplifiers/Number systems/Digital circuits, microprocessors and microcontrollers/Transducers/Communication systems/Index.

Audience – B.E. & B.Tech Students.

Basic Electronics



S.Y. Kulkarni •
B. Somanathan Nair
K. Shree Krishna Kumar

ISBN: 978-93-80578-81-1/Year 2011
Size 18 cm × 24 cm/Pages 224
Paperback/₹ 355.00

The present book is meant for the first-year engineering curricula of various universities in India. It describes the basic theories of Semiconductor Diodes and Application, Bipolar Junction Transistors, Biasing Methods, Other Devices, Amplifiers and Oscillators, Operational Amplifiers, Communication Systems and Boolean Algebra and Digital Logic.

Salient Features:

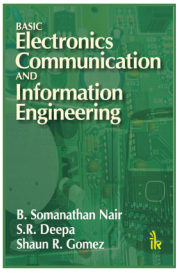
- Simplified analyses and derivations.
- More than 205 figures and circuit diagrams.
- Very simple and clear explanations.
- About 50 solved examples.
- More than 70 numerical problems with complete solutions.
- Several one-word multiple-choice questions.
- A large number of review questions to test the grasping capacity of the student.

Contents:

Semiconductor Diodes and Applications/Bipolar Junction Transistors/Biasing Methods/Other Devices/Amplifiers and Oscillators/Introduction to Operational Amplifiers/Communication Systems/Boolean Algebra and Digital Logic/Solutions/Index.

Audience – All branches of Engineering.

Basic Electronics, Communication and Information Engineering



B. Somanathan Nair
S.R. Deepa
Shaun R. Gomez

ISBN: 978-93-82332-14-5/Year 2013
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 505.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

This book deals with topics in Electronics, Communication, and Information Engineering. It is intended to cater to the needs of the first-year students of all branches of Engineering and Applied Sciences.

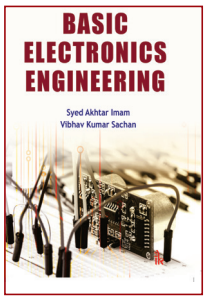
The book broadly discusses:

- Semiconductor diodes, rectifiers, and Zener diodes.
- Bipolar junction transistors, DC and AC load lines pertaining to transistor amplifiers.
- Junction and MOS field-effect transistors.
- RC-coupled amplifiers, biasing techniques and stability analysis, principles of power amplifiers.
- General principles of oscillations and oscillators, working of the Wien-bridge, RC phase-shift, Hartley, Colpitts, and crystal oscillators.
- Opamps and their applications.
- Basic digital gates such as AND, OR, and NOT, combinational and sequential logic circuits, and logic families such as TTL and CMOS.
- IC fabrication techniques.
- Analog and digital instruments, theory of basic electronic instruments, transducers, function generators and oscilloscopes.
- Amplitude, frequency, and phase modulation schemes; and block-diagram descriptions of AM, FM, and PM transmitters and receivers.
- Colour television, CCTV, CATV, DTH, and HDTV; LCD and plasma-display units, MP-3 audio-recording technique.
- Radar and navigational aids such as radar beacons and LORAN.
- Satellite communication, modern satellite navigational system of GPS.
- Optical communication using fibre-optic cables, LEDs and ILDs; PN photodiodes, PIN photodiodes, and APDs.
- Digital computers and microprocessors, low-level and high-level computer languages, OMR and OCR.
- Digital data transmission, PCM transmitter and receiver; ASK, PSK, and FSK, and elementary treatment on error correction and detection.
- Mobile cellular telephony, GSM and CDMA, WLL and GPRS.
- Principles of the Internet, the Internet protocols, DNS, circuit and packet switching techniques, LAN, MAN, WAN, WWW, internetwork devices, and Internet security.

The text contains around 400 figures and diagrams, 80 solved problems and more than 700 short questions and review questions with answers.

Audience – B.E. & B.Tech. students.

Basic Electronics Engineering



Syed Akhtar Imam
Vibhav Kumar Sachan

ISBN: 978-93-85909-41-2/Year 2017
Size 18 cm × 24 cm/Pages 434
Paperback/₹ 485.00

Basic Electronics Engineering is meant for the undergraduate courses in the disciplines of Electronics & Communication Engineering, Computer Science Engineering, Information Technology, Electronics & Instrumentation Engineering, Electrical & Electronics Engineering and postgraduate students specializing in Electronics. It will also serve as reference material for engineers employed in industry. The fundamental concepts and principles behind digital logic designs are explained in a simple, easy-to-understand manner. Each chapter contains a large number of solved examples and problems. The last chapter gives the possible experiments of digital logic design that can be done by students of B.E. / B. Tech level.

Salient Features

- Detailed coverage of electronic systems, instrumentation, communication, sequential logic circuits, combinational logic circuits, operational amplifier and applications of BJT and diode
- Comprehensive chapter on digital logic families, electronics measurement, feedback and oscillators
- A large number of solved examples and objective type questions, along with clear elucidation and solution of various problems, and a large number of neat, well-labelled diagrams

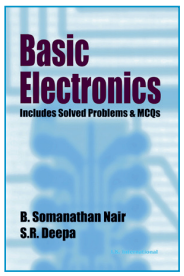
Contents:

1. Introduction to Electronics, Current and Voltage Sources and Semiconductor Physics
2. Semiconductor Diode and its Applications
3. Bipolar Junction Transistor (BJT), Transistor Biasing and Stabilization of Operating Point
4. Applications of BJTs
5. Field Effect Transistor (FET) & Special Diodes and their Applications
6. Electronics Oscillators & Basics of SCR & UJT
7. Number Systems and Boolean Algebra
8. Combinational Circuits
9. Sequential Circuits
10. Digital Logic Families
11. Electronic Instruments & Measurements
12. Basics & Applications of Communication System
13. Basics & Applications of Operational Amplifier

Audience – B. Tech ECE, Instrumentation, EEE, CSE, IT, BSc-IT, M. Tech students.

Basic Electronics

Includes Solved Problems & MCQs



B. Somanathan Nair
S.R. Deepa

ISBN: 978-93-80026-03-9/Year 2009
Size 18cm × 24cm/Pages 346
Paperback/₹ 395.00

The present book is meant for the first-year engineering curricula of various universities in India. It describes the basic theories of electron dynamics, semiconductor physics, semiconductor diodes, bipolar junction transistors, field-effect (junction, MOS and CMOS) transistors, voltage and power amplifiers, oscillators, power electronic devices (SCR and UJT), and operational amplifiers. It further describes radio, mobile, fiber-optic, satellite and microwave communication systems. It also deals with the basic theories of radar, electronic instrumentation, Boolean algebra and logic functions. The book has more than 250 diagrams to illustrate the theories described and numerous worked examples.

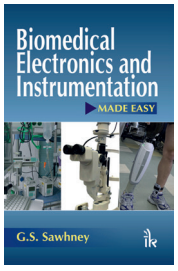
Contents:

Electron Dynamics/Basic Semiconductor Theory/Semiconductor PN Junctions/Rectifier Circuits/Special-purpose Semiconductor Diodes/ Bipolar Junction Transistors/The Field-effect Transistors/Bipolar Junction Transistor Amplifiers/RC-coupled Amplifiers/Sinusoidal Oscillators/Special Amplifiers/Silicon-controlled Rectifier/Operational Amplifiers/Communication Systems/Basic Electronic Instruments/ Number Systems/Boolean Algebra and Digital Logic/Index.

Audience – B.E. & B.Tech.

Biomedical Electronics and Instrumentation

Made Easy



G.S. Sawhney

ISBN: 978-93-81141-47-2/Year 2012
Size 16 cm × 24 cm/Pages 270
Paperback/₹ 345.00

A well set out textbook to explain the concepts of biomedical electronics and instrumentation. The text is admirably suited to meet the needs of the students of electronic engineering, electronic instrumentation, electrical engineering, and biomedical engineering.

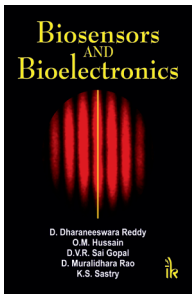
The book presents succinct coverage of the theory, definitions, formulae and examples. The text is well supported by plenty of diagrams and worked problems. To make the underlying concepts easily comprehensible, the text has been written in question-answer form.

Contents:

Anatomical Terms, Planes and Movements/Histology/Physiological Systems/Transducers and Biomedical Instru-mentation System/ Bioelectric Potentials and Electrodes/Cardiovascular System and Measurements/Respiratory System/Diagnostic Techniques/ Biotelemetry/Patient Care and Monitoring/Computers in Medicine and Digital Image/Signal Processing/Nervous System/ Ophthalmology Instruments/Prosthetic Devices and Therapies/ Monitors and Recorders/Systematic Body and Skin Temperature Measurement/Shock Hazards and Prevention/Index

Audience – Electronic engineering, electronic instrumentation, electrical engineering, and biomedical engineering.

Biosensors and Bioelectronics



D. Dharaneeswara Reddy
O.M. Hussain • D.V.R. Sai Gopal
D. Muralidhara Rao • K.S. Sastry

ISBN: 978-93-82332-19-0/Year 2012
Size 18 cm × 24 cm/Pages 512
Paperback/₹ 595

The development of novel nano-biomaterials and composites with unique properties is one of the fundamental driving forces in design and development of biosensors and bioelectronics to enhance the wealth and well-being of the society. The past twenty years of biosensors research has a significant impact in science and technology. The emerging field of bioelectronics makes use of biology in conjunction with electronics in a wider context.

Bioelectronics embodies the exploitation of biological or biologically inspired molecules as an integral part of an electronic device and the biosensors are the analytical embodiment of this art. The integration of electronics and development of packaging technologies make it possible to manufacture sensors and electronics on a silicon chip no bigger than a pin head. A key aspect is the interface between biological materials and micro- and nanoelectronics.

The book divided in 18 chapters covers:

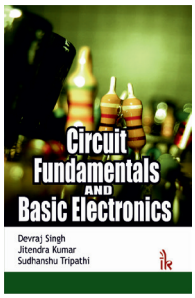
• Biosensors – History and Overview • Components and Perfor-mance factors • Biorecognition and Immobilization • Biosensor Technology and Fabrication • Transducers • Biosensors types and Applications in Clinical, Medical and Healthcare, Food Industry, Agriculture and Environmental Monitoring • Molecular Electronics • Photonic Computers and Carbon Chemistry.

This book also extends information on piezoelectric transducers, electromagnetic acoustic transducers (EMAT), molecular electronic seismometers (MES) and conductometric transducers.

Through its broad coverage, it can also be used for undergraduate courses or specialized graduate courses (B.Tech Biotech) on advanced topics.

Audience – B. Tech Biotechnology.

Circuit Fundamentals and Basic Electronics



Devraj Singh
Jitendra Kumar
Sudhanshu Tripathi

ISBN: 978-93-82332-57-2/Year 2014
Size 18 cm × 24 cm/Pages 456
Paperback/₹ 525.00

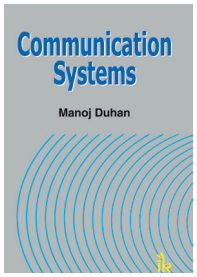
The present book is designed to meet the requirements of B.Sc., B.E. and A.M.I.E. students. It will also be useful for the students taking various competitive examinations. The book divided in 5 units and 15 chapters deals with the basic concepts of circuit fundamentals and basic electronics. The first three chapters cover the topics related to Circuit Fundamnetals whereas the last 12 chapters cover the topics related to Basic Electronics. The topics have been presented in systematic, logical and lucid manner and explained with the help of solved examples. Miscellaneous solved numerical problems are given at the end of each chapter for practice. Short and long answer type questions, unsolved numerical and multiple choice questions have been given at the end of each chapter for practice.

Contents:

Variying Currents/Bridge Measurements/Electrical Networks/ Semiconductors Physics and PN Junction Diode/Rectifiers, Filters and Power Supply/Bipolar Junction Transistors/Transistor Biasing and Circuits/Amplifiers/Multistage Transistor Amplifiers/Oscillators/ Modulations and Demodulation/Measuring Instruments/Field Effect Transistors/Digital Electronics/Miscellaneous Topics

Audience – B.Sc., B.E. and A.M.I.E. students

Communication Systems



Manoj Duhan

ISBN: 978-93-81141-61-8/Year 2012
Size 16 cm × 24 cm/Pages 328
Paperback/₹ 405.00

Communication Systems is based on the syllabi of the various universities, covering all the theoretical and mathematical aspects related to topics. The language used in explaining various concepts is extremely simple and understandable. Since proper understanding of the subject would involve a serious attempt to solve a variety of problems, a wide variety of problems with their step-by-step solutions are provided for every concept.

This book will serve the purpose of a text to engineering students of degree, diploma, AMIE and a useful reference for students preparing for GATE, UPSC and other technical competitive exams. This book has been developed right from the basic principles of the communication system and to its zenith in the development of analog communication techniques so far.

A set of questions has been given at the end for the readers to increase their understanding of the subject and to encourage further reading.

Contents:

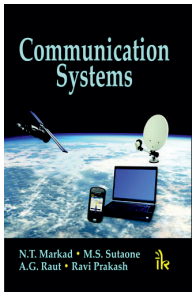
Introduction/Linear Modulation: Amplitude Modulation/Angle Modulation/Noise/Transmitters and Receivers/Probability Theory and Random Process/Pulse Analog Modulation/Pulse Code Modulation/Digital Communications/Index

Audience – Engineering and AMIE students

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Communication Systems



N.T. Markad • M.S. Sutaone
A.G. Raut • Ravi Prakash

ISBN: 978-93-81141-13-7/Year 2011
Size 16 cm × 24 cm/Pages 360
Paperback/₹ 405.00

This compact and student-friendly textbook offers a comprehensive introduction to several topics of communication systems, imparting a thorough grounding in the fundamental concepts of modulation and demodulation, radio transmitters and receivers, telephone communication systems, radar, television, network management in data communication, digital communication and some advanced communication systems such as cellular radio, satellite networking, and so on. It explains the basic theory of operation and applications. The main objective is to provide the students with a clear understanding of the principles of communication systems, aided by several diagrams and solved numerical problems.

Salient features:

- A number of solved examples that illustrate the application of theory to reinforce the concepts
- Concepts are explained with block diagrams that highlight the most significant points for better understanding
- The book is primarily addressed to the needs of the undergraduate students of electrical and electronics, electronics and communication systems, and telecommunication engineering.

Contents:

Methods of Communication/Amplitude and Angle Modulation/AM, FM Transmitters and Receivers/Pulse Modulation/Propagation of Waves/Fundamental of Information Theory/Telephone Exchange/ Digital Modulation and Detection Systems/Digital Modulation Technique, Error Probability and Line Coding/Random Process/ Fundamental of Data Communication/Multiple Access/Index.

Audience – B.E. & B.Tech.

CONTROL SYSTEMS
(with Matlab Programs)



New

Sonveer Singh
Sanjay Agrawal

ISBN: 978-93-90620-01-2/Year 2023
Size 18 cm × 24 cm/Pages 688
Paperback/₹ 995.00

In modern era, a control system plays a vital role in human life. A control system is an interconnection of components forming a system configuration in which quantity of interest is maintained or altered in accordance with a desired manner.

This book covers various aspects of control systems like reduction techniques of multiple systems, time response analysis of the three orders of control systems and steady state error of different systems. While delving into the finer details of the subject, the book explains different components of control system like actuators, sensors, etc. As the learners progress with these components, the book explains the stability of control system which affects its performance of control system. The root locus techniques of different systems and their frequency response analysis has been explained in a simple manner. The book has also dealt with stability in frequency domain, review of state variable techniques and also introduces design to the learner.

This book is designed for undergraduate engineering students of different branches in the field of control system. This book strictly follows the syllabus of various universities without sacrificing the basic principles and depth of the subject.

Salient Features

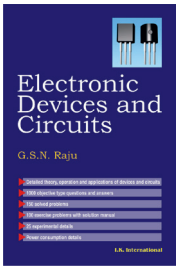
- Easy explanation for better understanding of concepts and basic principles.
- Includes solved problems, most of the problems have appeared in different universities and various competitive examinations such as GATE, IES,etc
- More than 150 objective type questions with answers.
- Offers a supplement which emphasizes modeling and the design process using MATLAB to read and initiate to start building the programs.
- Better explanation of concepts and basic principles.

Contents:

Introduction to Control System/Reduction of Multiple Subsystems/ Time Response Analysis/Steady State Errors/Control System Components/Stability of Control System/Root Locus Technique/ Frequency Response Analysis/Stability in Frequency Domain/ Introduction to Design/Review of State Variable Technique/Index

Audience – Undergraduate studentsof Engineering and postgraduate students of Physics and Electronics Engineering

Electronic Devices and Circuits



G.S.N. Raju

ISBN: 978-81-89866-02-0/Year 2006
Size 16 cm × 24 cm/Pages 588
Paperback/₹ 445.00

Electronic Devices and Circuits contains the fundamentals of electronic devices and their applications. The book is centred around the basic characteristics, analysis, design and application aspects of conductors, insulators, semiconductors, resistors, inductors, capacitors, basic network theorems, test and measuring meters, fabrication techniques, diodes, transistors, amplifiers and oscillators. The laboratory experiments related to all the important devices are also presented in it.

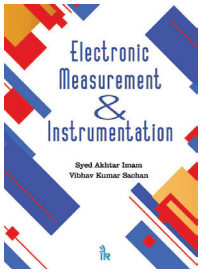
The fundamental concepts of the subject are described pointwise for easy readability and grasp. Several solved problems, objective-type questions and multiple-choice questions with answers, exercise questions with solution manual and a large number of worked out examples, besides 27 experiments conducted for all the engineering and science students are the highlights of the book. The entire content in the book is provided in a logical, orderly and a self-understandable manner.

Contents:

Common Electronic Materials and Properties/Passive Components, DC Sources, Circuit Theorems and Basic Meters/Electrodynamics and CRO/Diode: Characteristics and Applications/Rectifiers and DC Power Supplies/Transistor Characteristics and Applications/ Transistors Biasing and Stabilization Techniques/Analysis of Transistor Amplifiers Using Hybrid Equivalent Circuits/Field Effect Transistors/Feedback Amplifiers/Power Amplifiers/Power Devices/ Oscillators/Operational Amplifiers and Applications/Experiments/ Multiple Choice Questions/Index.

Audience – B.Sc./M.Sc. (Electronics) and B.Sc./M.Sc. (Physics), AMIETE, AMIE, Teachers, Circuits Designers, Scientists, Course on Semiconductor Electronic Devices and Circuits.

Electronic Measurement and Instrumentation



Syed Akhtar Imam
Vibhav Kumar Sachan

ISBN: 978-93-86768-13-1/Year 2018
Size 18 cm × 24 cm/Pages 820
Paperback/₹ 895.00

Electronic Measurement & Instrumentation caters to the needs of the undergraduate courses in the

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disciplines of Electronics & Communication Engineering, Electronics & Instrumentation Engineering, Electrical & Electronics Engineering, Instrumentation and Control Engineering and postgraduate students specializing in Electronics and Control Engineering. It will also serve as reference material for working engineers.

Salient Features:

- Detailed coverage of electronic systems, instrumentation, measurement, units & standards, errors in measurement, measurement of capacitance and inductance using AC bridges, instrumentation amplifier & applications of transducers.
- Comprehensive chapter on telemetry & data acquisition system, intelligent instrumentations and biomedical instrumentation.
- Each chapter contains a large number of solved examples and objective type questions.
- Large number of neat, well drawn and illustrative diagrams.

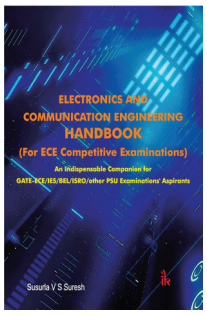
Contents:

Instrumentation, Measurement, Units and Standards/Errors in Measurement/Permanent Magnet Moving Coil (PMMC) Instruments/Voltage and Current Measurement/Digital Measuring Instruments/Resistors and Measurement of Resistance/Measurement of Capacitance and Inductance Using AC Bridges/Cathode Ray Oscilloscope and Digital Storage Oscilloscope/Signal Analyzer/ Calibration, Display and Recording Devices/Transducers and Their Applications/Sensors and Their Applications/Operational Amplifier and Instrumentation Amplifier/Telemetry and Data Acquisition System/Intelligent Instruments Using Microcontroller and Its Applications/Biomedical Instrumentation/Index

Audience – Undergraduate courses in Electronics & Communication Engineering, Electronics & Instrumentation Engineering, Electrical & Electronics Engineering, Instrumentation and Control Engineering and postgraduate students in Electronics and Control Engineering.

Electronics and Communication Engineering Handbook

For ECE Competitive Examinations



Susurla V S Suresh

ISBN 978-93-84588-97-7/Year 2017
Size 20 cm × 26 cm/Pages 448
Paperback/₹ 595.00

This is a comprehensive book which covers almost all the basic concepts of Electronics and Communication Engineering. It is meant for the students preparing for Graduate Aptitude Test in Engineering (GATE) in Electronics and Communication Engineering (ECE). Extensive study of all the core subjects in electronics is required to crack the GATE-ECE. This book is a one stop source for study and revision of all the important concepts in ECE (except mathematics subsection, which can be read from any standard text), so that the students do not miss any important concept that may be useful for solving problems in the examination.

This work is hoped to be useful for the students who also wish to pursue higher studies in institutions like the IISc, IITs and NITs. It brings the knowledge gained by the author in one place, and is written in a methodological way. During preparation for GATE, the flow of the study material is also an important factor, which is usually neglected. This book implements the sequence of contents that will help the students to prepare in a methodical way.

This book must be treated as a guide by the aspirants of GATE-ECE and in no way must be considered a substitute for an original reference text, though it covers almost all the important concepts needed for GATE-EC.

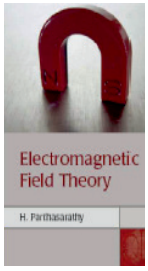
Audience – GATE-ECE aspirants. Also useful to students of ECE and IES aspirant.

Electromagnetic Field Theory

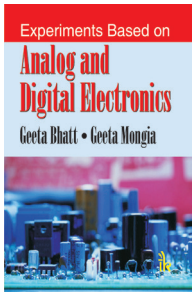
H. Parthasarathy

ISBN: 978-81-88237-09-8/Year 2004
Size 14 cm × 22 cm/Pages 368
Paperback/₹ 395.00

(See on page 150)



Experiments Based on Analog and Digital Electronics



Geeta Bhatt
Geeta Mongia

ISBN: 978-93-81141-72-4/Year 2012
Size 18 cm × 24 cm/Pages 228
Paperback/₹ 345.00

This book covers experiments performed in laboratory at undergraduate level. It includes experiments on:

- Semiconductor electronics
- Operational amplifiers
- Digital electronics
- 8085 microprocessor

Theoretical aspects of each experiment have also been covered for a better understanding of the subject. Special efforts have been made to keep the language simple and straightforward. The book is meant for B.Tech and B.Sc. courses in the field of Physics, Electronic, Instrumentation and Computer Science.

Contents:

Unit I: Exp. 1.1. To study the 1-V characteristics of a p-n junction diode (Forward and Reverse Bias)/Exp. 1.2. To study the 1-V characteristics of a zener diode and its application as voltage regulator/Exp. 1.3. Diode clamper and limiter (clipper) circuits/Exp. 1.4. Designing of power supply using bridge rectifier, capacitor filter and zener diode/Exp. 1.5. BJT Transistor characteristics of common-base and common-emitter configuration/Exp. 1.6. To design a single-stage CE. BJT Transistor amplifier/Exp. 1.7. To Study the V-I characteristics of a FET/Exp. 1.8. To plot the characteristics of UJT and design a relaxation oscillator

Exp. 1.9. To plot the V-I characteristics of silicon controlled rectifier.

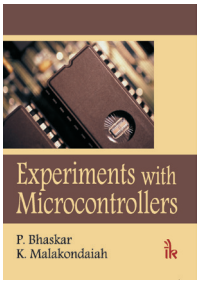
Unit II: Experiments based on digital electronics

Unit III: Experiments based on operational amplifier

Unit IV: 8085 Microprocessor.

Audience – B.Sc. and B.Tech. courses.

Experiments with Microcontrollers



P. Bhaskar
K. Malakondaiah

ISBN: 978-93-81141-79-3/Year 2012
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 505.00

One of the most widely produced and used microcontrollers in the is the 8051 and is the most popular to study. Hence, the Intel 8051/89C51 microcontroller is chosen to design the experiments/projects. The basic knowledge of 8051 microcontroller viz., architecture and its instruction set required to understand the experiments is given in the book.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400 info@ikinternational.com

This book is organized into three parts. Part I deals with the software experiments - addition, subtraction, multiplication, code conversion etc. All the software programs are written in assembly language. Part II describes the hardware experiments. Some of the hardware experiments are designed with microcontroller kits and many are discussed with 89C51 microcontroller alone. Every experiment is written in such way that an experimenter need not require additional information to perform the experiment. In most of the experiments both assembly language and embedded 'C' programs are given. Part III deals with the complete projects. These projects are related to the applications of microcontroller either for measuring and/or controlling a parameter. The salient features and descriptions of sensors/transducers, signal conditioning elements and actuators are provided wherever it is necessary.

Contents:

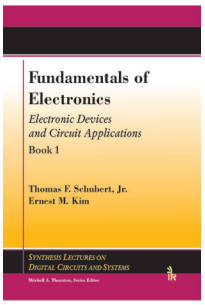
PART – I Software Experiments/Assembly language program (ALP) for addition of two 16-bit numbers/Assembly language program for subtraction of a 16-bit number from a 16-bit number/Assembly language program for multiplication of 16-bit number with an 8-bit number/Assembly language program for dividing a 16-bit number with an 8-bit number/Assembly language program for multiplication of a 16- bit number with a 16-bit number/Assembly language program for dividing a 16-bit number with a 16-bit number/Assembly language program to convert 5 digit unpacked BCD number into corresponding HEX number/Assembly language program to convert HEX number into corresponding BCD numbervAssembly language program for arranging the given data in ascending order/Assembly language program for arranging the given data in descending order

PART – II Hardware Experiments/To interface a binary counter display with microcontroller/To interface a seven segment display with microcontroller/To interface a multiplexed display with microcontroller/To interface a stepper motor with microcontroller and/To rotate the stepper motor in clockwise and counter clockwise directions with full step (1.8°) and half step (0.9°) angles/To interface an 8-bit D/A converter MC1408 with microcontroller/To convert digital data into corresponding analog voltage andvTo generate waveforms viz. square, rectangular, ramp and triangle/To construct an A/D converter using D/A converter by successive approximation technique/To interface an 8-bit A/D converter ADC0809 with microcontroller/To interface Liquid Crystal Display (LCD) module with microcontroller and display labels on it/To interface an 8-bit A/D converter ADC0809 with microcontroller and/To measure the analog voltage and display the same on LCD module/To interface a 12 bit A/D converter AD1674 with microcontroller/To measure the analog voltage and display it on LCD module/To interface a 16-bit A/D converter AD976 and/To measure the analog voltage and display same on LCD module/To interface a 12-bit dual slope A/D converter ICL7109 with microcontroller and/To measure the analog voltage and display the same on LCD modulevTo interface 4½ digit A/D converter ICL7135 with microcontroller and/To measure analog voltage and display on LCD module/To measure temperature of water bath/To measure the frequency of a TTL signal/To measure pulse width (ON time) of a TTL signal/To measure phase angle between two signals/To interface serial port MAX232 -with microcontroller

PART – III Projects/To design and construct microcontroller based pH measurement system/To design and construct microcontroller based conductivity measurement system/To design and construct microcontroller based liquid level measurement system/To design a microcontroller board for measurement and control applications/To design and construct microcontroller based DC motor speed control system/To design and construct microcontroller based temperature control system

Audience – Students/researchers/teachers of various disciplines in science, engineering, and technology on microcontrollers at the graduate and post-graduate level.

Fundamentals of Electronics: Electronic Devices and Circuit Applications, Vol-I



Thomas F. Schubert
Ernest M. Kin

ISBN: 978-93-85909-21-4/Year 2017
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 405.00
4 Volume Set
ISBN: 978-93-85909-61-0/` 1395.00

Electronic Devices and Circuit Applications, is the first of four books of a larger work, Fundamentals of Electronics. It is comprises of four chapters describing the basic operation of each of the four fundamental building blocks of modern electronics: operational amplifiers, semiconductor diodes, bipolar junction transistors, and field effect transistors. Attention is focused on the reader obtaining a clear understanding of each of the devices when it is operated in equilibrium.

Ideas fundamental to the study of electronic circuits are also developed in the book at a basic level to lessen the possibility of misunderstandings at a higher level. The difference between linear and nonlinear operations is explored through the use of a variety of circuit examples including amplifiers constructed with operational amplifiers as the fundamental component and elementary digital logic gates constructed with various transistor types.

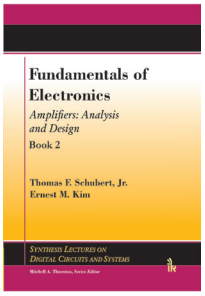
The book has been designed primarily for use in an upper division course in electronics for electrical engineering students. Typically such a course spans a full academic years consisting of two semesters or three quarters. As such, Electronic Device and Circuit Applications, and the following two books, Amplifiers: Analysis and Design and Active Filter and Amplifier Frequency Response, from an appropriate body of material for such a course. Secondary applications include the use in a one-semester electronics course for engineers or as a reference for practicing engineers.

Contents:

Operational Amplifiers and Applications/Diode Characteristics and Circuits/Bipolar Junction Transistor Characteristic/Field Effect Transistor Characteristics.

Audience – All engineering (core) students, and electronic, instrumentation, communication and electrical engineering students (intermediate) and reference book for practicing engineers. ECE GATE/PSU aspirants.

Fundamentals of Electronics: Amplifiers: Analysis and Design, Vol-II



Thomas F. Schubert
Ernest M. Kin

ISBN: 978-93-85909-22-1/Year 2017
Size 18 cm × 24 cm/Pages 268
Paperback/₹ 460.00
4 Volume Set
ISBN: 978-93-85909-61-0/₹ 1395.00

Amplifiers: Analysis and Design is the second of four books of a larger work, Fundamentals of Electronics. It comprises four chapters that describe the fundamentals of amplifier performance. Beginning with a review of two-port analysis, the first chapter introduces the modeling of the response of transistors to AC signals. Basic one-transistor amplifiers are extensively discussed. The next chapter expands the discussion to multiple transistor amplifiers. The coverage of simple amplifiers is concluded with a chapter that examines power amplifiers. This discussion defines the limits of small-signal analysis and explores the realm where these simplifying assumptions are no longer valid and distortion becomes present. The final chapter concludes the book

with the first of two chapters in Fundamentals of Electronics on the significant topic of feedback amplifiers.

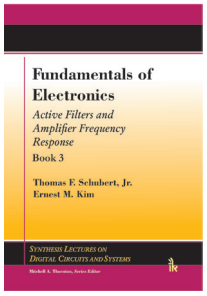
The book has been designed primarily for use in an upper division course in electronics for electrical engineering students. Secondary applications include the use with Electronic Devices and Circuit Applications in a one- semester electronics course for engineers or as a reference for practicing engineers.

Contents:

Single Transistor Amplifiers/Multiple-Transistor Amplifiers/Power Amplifiers and Output Stages/Feedback Amplifier Principles

Audience – All engineering (core) students, and electronic, instrumentation, communication and electrical engineering students (intermediate) and reference book for practicing engineers. ECE GATE/PSU aspirants.

Fundamentals of Electronics: Active Filters and Amplifier Frequency Response, Vol-III



Thomas F. Schubert
Ernest M. Kin

ISBN: 978-93-85909-23-8/Year 2017
Size 18 cm × 24 cm/Pages 296
Paperback/₹ 375.00
4 Volume Set
ISBN: 978-93-85909-61-0/₹ 1395.00

Active Filters and Amplifier Frequency Response is the third of four books of a larger work, Fundamentals of Electronics. It is comprises three chapters that describe the frequency dependent response of electronic circuits. This book begins with an extensive tutorial on creating and using Bode diagrams that lead to the modeling and design of active filters using operational amplifiers. The second chapter starts by focusing on bypass and coupling capacitors and, after introducing high-frequency modeling of bipolar and field-effect transistors, extensively develops the high- and low-frequency response of a variety of common electronic amplifiers. The final chapter expands the frequency-dependent discussion to feedback amplifiers, the possibility of instabilities, and remedies for good amplifier design.

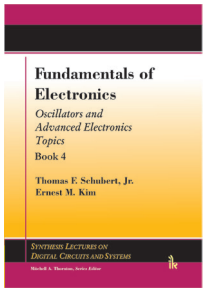
Fundamentals of Electronics has been designed primarily for use in upper division course in electronics for electrical engineering students and for working professionals. As such, Active Filters and Amplifier Frequency Response, and the first two books in the series, Electronic Devices and Circuit Applications and Amplifiers: Analysis and Design form an appropriate body of material for such a course.

Contents:

Active Filters/Frequency Response of Transistor Amplifiers/ Feedback Amplifier Frequency Response.

Audience – All engineering (core) students, and electronic, instrumentation, communication and electrical engineering students (intermediate) and reference book for practicing engineers. ECE GATE/PSU aspirants.

Fundamentals of Electronics: Oscillators and Advanced Electronics, Vol-IV



Thomas F. Schubert
Ernest M. Kin

ISBN: 978-93-85909-24-5/Year 2017
Size 18 cm × 24 cm/Pages 372
Paperback/₹ 355.00
4 Volume Set
ISBN: 978-93-85909-61-0/₹ 1395.00

Oscillators and Advanced Electronics is the final book of a larger, four-book set, Fundamentals of Electronics. It consists of five chapters that further develop practical electronic applications based on the fundamental principles developed in the first three books.

This book begins by extending the principles of electronic feedback circuits to linear oscillator circuits. The second chapter explores non-linear oscillation, waveform generation, and waveshaping. The third chapter focuses on providing clean, reliable power for electronic applications where voltage regulation and transient suppression are the focus. Fundamentals of communication circuitry form the basis for the fourth chapter with voltage-controlled oscillators, mixers, and phase-lock loops being the primary focus. The final chapter expands upon early discussions of logic gate operation (introduced in vol. 1) to explore gate speed and advanced gate topologies.

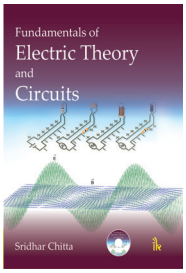
Fundamentals of Electronics has been designed primarily for use in an upper division course in electronics for electrical engineering students and for working professionals. As such, **Oscillators and Advanced Electronic Topics**, and the first three books in the series, **Electronic Devices and Circuit Applications, Amplifiers: Analysis and Design** and Active Filters and Amplifier Frequency Response form an appropriate body of material for such course.

Contents:

Oscillator Circuits/Waveform Generation and Waveshaping/Power Circuits/Communication Circuits/Digital Circuits.

Audience – All engineering (core) students, and electronic, instrumentation, communication and electrical engineering students (intermediate) and reference book for practicing engineers. ECE GATE/PSU aspirants.

Fundamentals of Electric Theory and Circuits



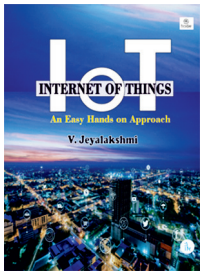
Sridhar Chitta

ISBN: 978-93-85909-46-7/Year 2018
Size 18 cm × 24 cm/Pages 808
Paperback/₹ 995.00

(See on page 59)

Internet of Things: An Easy Handson Approach

New



V. Jeyalakshmi

ISBN: 978-93-90620-48-7/Year 2023
Size 16 cm × 24 cm/Pages 286
Paperback/₹ 495

Internet of Things refers to the connection of real-world things around us with the internet. The reason behind this IoT technology is to provide ubiquitous computing that is monitoring and control of anything, anytime at anywhere. To build successful IoT applications we are in need of certain layers-wise communication knowledge about the technology. Starting from the OSI physical layer till application layer the book describes each layer with its necessary applications.The topics covered in this book are based on the curricula of engineering and science students who are in development as well as in research stage. Several real-time case studies are the added feature of this book for better understanding.

Salient Features:

- Layer-wise description for easy understanding.
- Discusses various IoT accessing technologies.
- Various IoT case studies and industrial applications.
- Detailed view about design methodology and different IoT hardware platforms.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Contents:

Part – I Introduction and Concepts:

Communication Era/IoT Devices/Techniques for IoT/Architectural View/Communication and Networking in IoT/Security Challenges in IoT.

Part – II Developing Internet of Things

IoT Implementation Tools/Building IoT Ecosystem/Applications and Case Studies.

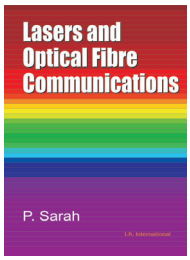
Annexure 1: Setting up of Arduino Experiments

Annexure 2: Setting up of Raspberry Experiments

Index

Audience – Audience: B.E & B.Tech (ECE)

Lasers and Optical Fibre Communications



P. Sarah

ISBN: 978-81-89866-58-7/Year 2008
Size 16 cm × 24 cm/Pages 296
Paperback/₹ 395.00

The book presents the latest developments in laser technology in a concise and lucid manner. The first few chapters deal with the concepts such as lasers and their origin, theoretical concepts of laser technology and their applications to various spheres. This is followed up with an exhaustive study of the various laser schemes and different laser types. A separate chapter is devoted to the applications of laser technology in spheres such as science, technology, medicine and defence.

Optical fibres are equally elegantly dealt with. In particular, Ray and Mode Theory, transmission characteristics, dispersion properties of optical wave guides, and the nature of detectors deserve special mention for the excellent treatment in the book. The gamut of communication systems including the nuances of laser propagation is also presented.

The most important feature of the book is the seamless blending of theory with practice to bring out how the components of fibre systems are put together to achieve techno economic solution. The book concludes with a short note on holography and masers.

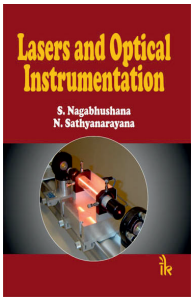
This book will be useful for students of B.Sc, M.Sc, B.Tech, B.E. and M.Tech., practising engineers and scientists.

Contents:

Introduction to Lasers/Principles of Lasers/Einstein's Coefficients/ Three-and Four-Level Laser Schemes/Types of Lasers/Laser Applications/Introduction to Optical Fibres/Principle of Fibre Optics/Types of Fibres/Applications of Optical Fibres/ Attenuation in Fibre Optics/Optical Detectors/Holography/ Maser/Appendices/ Glossary/Index.

Audience – Students of B.Sc., MSc., B.Tech., B.E. and M.Tech., practising engineers and scientists.

Lasers and Optical Instrumentation



S. Nagabhushana
N. Sathyanarayana

ISBN: 978-93-80578-23-1/Year 2010
Size 18 cm × 24 cm/Pages 346
Paperback/₹ 435.00

Lasers and Optical Instrumentation covers B.E., M.E., and M.Sc. (Electronics) degree courses. The text covers basic principles of lasers, types of lasers and their characteristics, laser applications in engineering and medicine. Further the book includes extensive coverage of optoelectronic devices, fibre optic communication and fibre optic sensors. The book includes many solved problems throughout the text to support the theoretical concepts and help in understanding of underlying principles. Review questions have been included at the end of each chapter.

Contents:

Introduction and Laser Principles/Laser Characteristics and Applications/Laser Applications-I (Overview)/Laser Applications-II/Optoelectronic Components/Fibre Optics Communication/Fibre Characteristics/Manufacture and Applications-I/Optical Information Technology/Fibre Optic Sensors/Conclusion: Future Prospects/ Appendices/Bibliography/Index.

Audience – Students of B.E., M.E., and M.Sc. (Electronics) degree courses.

Learn Simulink

Syed Nasimul Alam

ISBN: 978-81-959662-3-3/ 2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

Forthcoming

Simulink has become one of the most widely used engineering software packages in academics and industry. The framework of this book is intended to highlight the essential facets of Simulink modelling. The chapters are constructed in order to ensure each topic builds on the research that came preceding it. The concise explanations and illustrative examples have been used to simplify the complex concepts and techniques.

The book gives a thorough understanding of the Simulink modelling environment. It is a comprehensive, hands-on Simulink tutorial. The book demonstrates how Simulink can be adopted efficiently in a range of engineering applications.

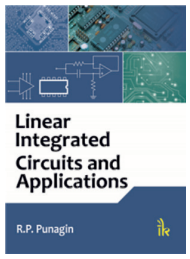
Salient Features:

- A broad overview about the Simulink modelling environment
- A comprehensive guide to Simulink
- The inclusion of detailed instructions and illustrative examples

Audience – B.E, B.Tech

Shelving – Electronics

Linear Integrated Circuits and Applications



R.P. Punagin

ISBN: 978-93-82332-59-6/Year 2014
Size 18 cm × 24 cm/Pages 368
Paperback/₹ 455.00

The book covers the syllabus prescribed for B.E. (E & C, Telecom, Biomedical, Instrumentation Technology and Medical Electronics). Care is taken to develop the subject logically so that the book could also be used by B.Sc. and diploma students. Neatly drawn diagrams, stepwise illustrations, and graded numerical examples, are included in every chapter to support the contents. Exercises and problems with answers are included at the end of each chapter.

The book emphasises on fundamental concepts, providing circuit description, circuit working and the circuit design for each circuit. Linear ICs developed in the recent past like PLL and voltage regulator ICs are also covered.

The book is illustrated with more than 300 neatly drawn diagrams and also includes more than 160 solved examples with answers.

Divided in eight chapters, the book broadly deals with:

- Direct and capacitor coupled Opamp amplifiers
- Frequency response and compensation to improve the performance of Opamp circuits
- Voltage and current sources, instrumentation amplifiers and precision rectifiers, limiting and clamping circuits
- Log and antilog amplifiers
- Non-linear circuit applications
- Power supply circuits and ICs such as 78XX series, LM723, 555 Timer
- A/D and D/A circuits and PLL principles.

Contents:

Operational Amplifier Fundamentals/OPAMPS as AC Amplifiers/ OPAMPS Frequency Response and Compensation/OPAMPS Linear Applications (Part – 1)/OPAMPS Linear Applications (Part – 2)/Non-linear Circuit Applications/DC Voltage Regulators/Other Linear IC Applications

Audience – B.E. (E & C, Telecom, Biomedical, Instrumentation Technology and Medical Electronics)

Microcontrollers and Embedded System Design



Nilesh Bhaskarrao Bahadure
Saurabh Chandrakar

ISBN: 978-93-85909-70-2/Year 2019
Size 16 cm × 24 cm/Pages 848
Paperback/₹ 995.00

The book first deals with the microcontrollers and then goes on to discuss embedded system design, and finally to the applications of embedded systems. Apart from the most popular 8051 Intel family of MCs, it also discusses the Intel-8096, ARM and PIC suites of microcontrollers. The basic architecture and various makes are detailed in the first part of the book. Both, the interfacing and the software aspects have been given an integrated treatment which is necessary for this subject. It includes 200+ examples, solved in a step-by-step method and with the aid of flowcharts for better understanding. Data used and the results obtained have been appropriately detailed in these examples. Applications of microcontrollers such as LEDs, 7-Segment LEDs, LCDs, Keyboard, Stepper Motor, DC Motor, Servo Motor, Keyboard, ADC, and DAC, etc., are simulated with IDE simulation software and Proteus design tools so that the students are exposed to the practical approaches involving designing of small projects. Embedded system applications in a single board computer have been covered separately.

Salient Features:

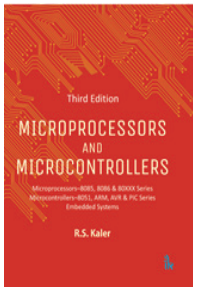
- Balanced coverage of both the theory and programs, with a wide variety of applications/interfacing on different devices.
- A large number of examples involving programming with their flowcharts.
- Use of simulation software to explain execution of programming in a step-by-step manner.
- Expanded coverage on memory interfacing.
- A dedicated chapter on single-board computer and embedded systems.

Contents:

Basics of 8051 Microcontroller/Instruction set and Programming of 8051/Assembly Language Programming of 8051 Microcontroller/ Timers of 8051 Microcontroller/Serial Communication of Microcontroller 8051/Interrupts of 8051 Microcontroller/ Memory Interfacing with Microcontroller 8051/Applications of 8051 Microcontroller/Embedded Systems/PIC, 8096 and ARM Microcontrollers/Applications of Single Board Computer/Index.

Audience – Undergraduates and graduate level courses in Microcontrollers and Embedded System Design.

Microprocessors and Microcontrollers



Microprocessors–8085, 8086 & 80XXX Series Microcontrollers–8051, ARM, AVR & PIC Series Embedded Systems

Third Edition

R.S. Kaler

ISBN: 978-93-85909-17-7/Year 2019
Size cm × cm/Pages 768
Paperback/₹ 695.00

The third edition of Microprocessors and Microcontrollers explores all the aspects of microprocessor family and interfacing techniques in a simple and easy to understand manner. In this book, fundamentals of ARM processors and PIC 18 Microcontrollers have been detailed respectively in different chapters with Arduino as the added chapter in the third edition. All other important key aspects like Intel 80XXX series, Pentium-4, ARM, PIC18 and embedded systems have also been discussed. The third edition goes in depth knowledge of the chapters from previous edition. A review of important terms and concepts is also given at the end of each chapter. Each chapter also has questions and problems for an intuitive grasp on the subject.

Salient Features:

- Intel Microprocessor 8085, 8086 and 80XXX architecture, pin description, instructions set, addressing modes, interrupts, execution of instructions, Instruction format, and so on.
- The subdivision of introduction to ARM and PIC microcontrollers from the second edition into two separate chapters, **Fundamentals of ARM processor** and **PIC microcontrollers** are the highlights.
- Also, an additional chapter for on **Arduino** has been added for detailed knowledge about the open-source platform.
- Interfacing devices, data transfer schemes, I/O devices, Centronics parallel communication, 8255-programmable peripheral interface (PPI), 8279, RS-232C, UART, programmable interval timer, 8251, 8253/54, 8257, 8259 and 8237.
- Microprocessor applications, seven-segment LED display, LCD display, Interfacing I/O with Matrix type keyboard, different types of A/D and D/A converters, microprocessor based traffic signal controller.
- Microcontroller 8051/8031, MCS-51 family PIC18 overview, architecture, memory organization, pin configuration, counters, timers, timer counter interrupts, serial communication, serial data interrupts, transmission modes and so on.
- ARM processors, architecture, core data flow, registers and CPSR, pipeline, exception, interrupt, vector modes, instruction set, writing code in assembly, instruction scheduling, allocation of registers and so on.
- Embedded systems, RTS with description of soft and hard Real Time Systems, C programming for 8051 using KEIL IDE, instruction set for 8085, 8086 and 8051.
- Arduino Uno basics, pin diagram, hardware, software (KEIL IDE), programming basics, coding of different programs, interfacing of DC motor and IR detection module with Arduino, Line Follower Robot and the Engine of War.

Contents:

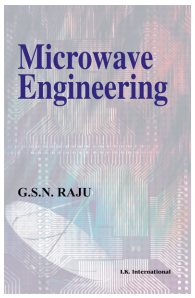
Introduction to Microprocessor/Digital Circuits & Memories/Intel 8085 Microprocessor/Intel 8086 Microprocessor/Interfacing Devices/ Microprocessor Applications/Intel 80XXX Series/Microcontroller 8051/Fundamentals of ARM Processor/PIC 18 Microcontroller/ Embedded Systems/Arduino/Index.

Audience – UG and PG students of ECE, CSE, IT and computer applications.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Microwave Engineering



G.S.N. Raju

ISBN: 978-81-89866-79-2/Year 2008
Size 16 cm × 24 cm/Pages 452
Paperback/₹ 475.00

Microwave Engineering is a core subject for all Communication Engineering students both at UG and PG levels.

Starting with the fundamentals, the book discusses: Microwaves and their Applications; Microwave Tubes; Microwave Semi-conductor Devices; Scattering Matrix Parameters; Microwave Passive Components; Microwave Transmission Lines; Microwave Integrated Circuits; Microwave Antennas and Microwave Measurements.

A key feature of this book is a large number of illustrative examples, problems and about 1000 objective and multiple choice questions with answers. A number of exercise problems with solutions are also included.

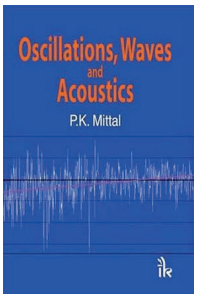
The last chapter includes 14 lab experiments to provide the students with the procedures of measurement of different paramenters of microwave devices. The book covers the course content of B.E./B. Tech program in Electronics and Communication Engineering. It also meets the requirements of M.Sc (Electronics), M.Sc (Tech), AMIETE, AMIE (Telecommunication) and other such courses.

Contents:

Introduction to Microwaves and Applications/Microwave Tubes for Microwave Signal Generation/Microwave Semiconductor Devices/ Scattering Matrix Parameters/Microwave Passive Components/ Microwave Transmission Lines/Microwave Integrated Circuits/ Microwave Antennas/Microwave Measurements/Objective Questions and Answers/References/Index.

Audience – B.E./B.Tech Electronics and Communication Engineering students.

Oscillations, Waves and Acoustics

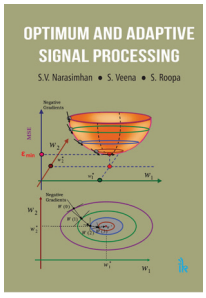


P.K. Mittal

ISBN: 978-93-80578-27-9/Year 2010
Size 16 cm × 24 cm/Pages 568
Paperback/₹ 425.00

(See on page 155)

Optimum and Adaptive Signal Processing



S.V. Narasimhan
S. Veena
S. Roopa

ISBN: 978-93-85909-59-7/Year 2017
Size 18 cm × 24 cm/Pages 1016
Paperback/₹ 1295.00

Optimum and Adaptive Signal Processing has been developed in a simple, logical and directed way. The ease of understanding is facilitated by providing all the intermediate steps in a mathematical expression derivation and its physical meaning, preserving the rigour and depth of the subject. Chapters 2 to 5, covering the background, make the book self-contained. The detailed treatment of both optimum and adaptive processing (unlike in some of the other books), enables enhanced understanding. Also, chapters 1-8 and 9-17, can cater as books on optimum signal processing and adaptive signal processing (for those with optimum signal processing background), respectively.

A CD containing MATLAB programs for most of the illustrations is provided.

Salient Features:

- The nonparametric estimation approach limitation, the trade-off between variance and frequency resolution presented emphasises the importance of optimum approach, for spectrum and bispectrum. A group delay approach that reduces this limitation for spectrum and recovers the system phase from bispectrum, are given.
- In the optimum approach for the AR modelling, warped versions of linear prediction, Burg and escalator predictor are covered. Among the ARMA methods, for the preferred simultaneous pole-zero modelling, its limitations and the necessary solutions required to overcome them, are dealt. The ARMA modelling by pole-zero decomposition in group delay domain and its use in different scenarios are indicated. Further, the bispectrum estimation via AR model is presented.
- Different versions of LMS adaptive algorithms, like, leaky, momentum, sign-sign, median, filtered input LMS (FX-LMS), Griffiths LMS and variable stepsize LMS; are dealt. A computationally efficient algorithm which uses both variable stepsize and variable gradient which are robust to white/colour observation noise and its transform domain version which further improves convergence rate, are addressed. Compared to forward error LMS, the forward-backward error LMS algorithm which reduces the misadjustment by 6 dB both in time and transform domain and also its warped version; are considered. Also, a bispectrum based LMS adaptive algorithm for nonminimum phase system identification, is presented.
- Computationally efficient Joint Laguerre escalator lattice adaptive algorithm appropriate for nonstationary signals, the lattice and cascade predictors which have a faster convergence; are presented. Computationally efficient Frequency domain partitioned block LMS approach and its delayless version; are dealt.
- The conjugate gradient (CG) method for the adaptive filter which uses single CG iteration for every sample both in time and transform domain; are dealt.
- In delayless subband/wavelet transform domain adaptive approach, the trade-off between aliasing and eigenvalue spread and the complex weight transform; which are solved by using DCT harmonic wavelet transform, is covered.
- For IIR equation error adaptive filters, the bias for the colour observation noise is removed by estimating the system output and using it as input to the adaptive filter which estimates the denominator polynomial, known as bias freen approach and its extension to. Steiglitz-Mc bride method; are introduced. An adaptive notch filter realized by Steiglitz-Mc bride approach using variable stepsize LMS algorithm is also introduced. The Recursive Least Square (RLS) algorithm and its fast transversal and lattice versions; are derived in detail. Also the affine projection and Kalman filter, are briefly treated.
- The nonlinear adaptive filters based on back propagation neural network and on 2nd order Volterra series realized by transversal, lattice structures and by transform approach; are given. Further, the applications of adaptive filter for communication, audio, speech and acoustics; biomedical signals and Inverse control; are presented.

Contents:

Introduction/Signal Approximation: The Fourier Transform/Signal Transmission and Power Spectral Density/Sampling Theorem and Discrete Fourier Transform/Random Signal Theory/Non-parametric Spectral Estimation/Parametric Spectral Estimation/Parametric Approach in Its General form - The Wiener Filter/Iterative Solution to Normal Equations: Method of Steepest Descent/Least Mean

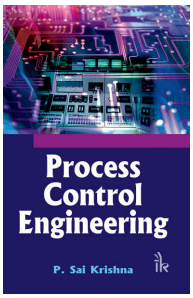
Square (LMS) Algorithm/Orthogonalization Based Least Mean Square Algorithm/Subband and Wavelet Adaptive Filters/Adaptive Infinite Impulse Response (IIR) Filters/Block /Frequency Domain LMS Algorithm/Recursive Least Square Adaptive Filters/Nonlinear Adaptive Filters/Applications of Adaptive Filters

Audience – Undergraduate and Postgraduate students in Electronics, Instrumentation and Communication Engineering. Will be useful reference for research levels and also by industrial professionals in engineering and science.

Process Control Engineering

P. Sai Krishna

ISBN: 978-93-80026-39-8/Year 2010
Size 16 cm × 24 cm/Pages 264
Paperback/₹ 355.00



This book has been prepared keeping in view the abstractness of this science "Process control" and for better understanding of this subject for practising engineers, teachers and students of Instrumentation, Electrical and Electronics disciplines.

The major topics of process control have been explained by taking appropriate illustrative examples and a number of solved problems wherever required, for easier comprehension and quick assimilation of the subject.

Also the subject matter has been carefully prepared to cater to the needs of multi-disciplined engineering students where process control systems, are an integral part of their curriculum.

It explains the concepts of process control instrumentation with a touch of practicality supported by related mathematical background to make the reading journey interestingly instructive.

Contents:

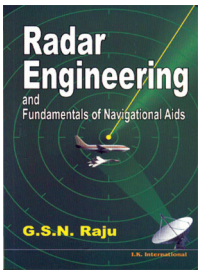
Introduction/Modes of Controller Operation/Effects of Control Actions on Processes/Tuning of Controllers/Implementation of Control Actions/Final Control Elements/Process Control System Configurations/Index.

Audience – Instrumentation, Electrical and Electronics Engineering.

Radar Engineering

G.S.N. Raju

ISBN: 978-81-906942-1-6/Year 2010
Size 16 cm × 24 cm/Pages 472
Paperback/₹ 445.00



This book contains the applications of radars, fundamentals and advanced concepts of CW, CW Doppler, FMCW, Pulsed doppler, MTI, MST and phased array radars etc. It also includes effect of different parameters on radar operation, various losses in radar systems, radar transmitters, radar receivers, navigational aids and radar antennas.

Salient Features:

- Nine chapters exclusively suitable for one semester course in radar engineering.
- More than 100 solved problems.
- More than 1000 objective questions with answers.
- More than 600 multiple choice questions with answers.
- Five model question papers.
- Logical and self-understandable system description.

Contents:

Introduction to Radar, Radar Parameters and their Definitions/Basic Radars/Advanced Radars/Traking Radar/Factors Affecting Radar Operation and Radar Losses/Radar Transmitters/Radar Receivers/Fundamentals of Navigational Aids/Radar Antennas/Multiple Choice Questions and Objective Questions with Answers/Solved Problems/Exercise Problems/Model Question Papers/Index.

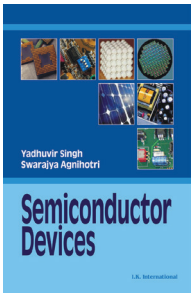
Audience – The book will be useful for the students and teachers of B.E./B.Tech, M.Sc (Electronics), M.Sc (Tech), M.Sc (Physics), AMIETE, AMIE

Shelving – Electronics

Satellite Communication

Dharma Raj Cheruku

ISBN: 978-93-80026-41-1/Year 2009
Size 18 cm × 24 cm/Pages 344
Paperback/₹ 395.00



Satellite communication is a special technology in the field of electronic communication systems. Graduate engineering students with Electronics & Communication Engineering will find this book useful to understand the concepts of satellite communication. This book deals with this technology and gives an adequate treatment of the subject. Analysis & design of satellite communication equipment is also treated to the extent required for the students. It is very useful reference for those candidates preparing for higher studies. Mathematical analysis is presented wherever required and the concepts are well illustrated. It also deals with the latest technological developments in the related fields.

Contents:

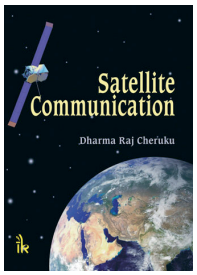
Introduction/Satellite Orbits/Satellite Link Design/Spacecraft/Multiple Access/Earth station/Modulation, Coding & Multiplexing/Digital Satellite Link/Non Geo-stationary Satellite System/Satellite Navigation & Global Positioning Systems/Applications & Future of Satellite Communications/Index.

Audience – B.Tech. level (Electrical & Electronics and Instrumentation & Control discipline).

Semiconductor Devices

Yaduvir Singh
Swarajya Agnihotri

ISBN: 978-93-80026-12-1/Year 2009
Size 16 cm × 24 cm/Pages 236
Paperback/₹ 345.00



Salient Features:

- Minutely worked out examples give a complete understanding and hold on this subject.
- Variety of solved, unsolved and multiple choice questions completely cover the diversity of this subject, which is extremely useful for semester examinations, GATE, PSUs examinations.
- Pedagogy includes relevant and to the point text, solved questions, unsolved questions and multiple choice questions.

It will prove highly useful for engineering students of UG, PG and PhD of electrical, electronics and communication, computer science, information technology, civil, industrial, instrumentation and control aerospace, mechanical and chemical disciplines. This book is also of greatest utility to the students doing AMIE, Grade IETE, M.Sc. (Physics), M.Sc. (Electronics) etc.

Contents:

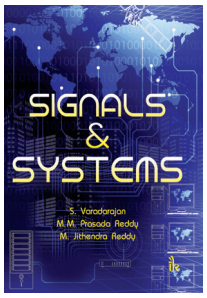
Semiconductor and P-N Junction Diode/Bipolar Junction Transistor/High Frequency Model of BJT/Field Effect Transistors/Power Supplies/Index

Audience – Students of AMIE, Grade IETE, M.Sc. (Physics), M.Sc. (Electronics) etc.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Signals and Systems



S Varadarajan
M.M. Prasada Reddy
M. Jithendra Reddy

ISBN: 978-93-84588-40-3/Year 2016
Size 18 cm × 24 cm/Pages 728
Paperback/₹ 695.00

The understanding of signals and systems is a prerequisite to learning digital signal processing and communication systems. This book presents concepts of signals & systems using a large number of well-designed and illustrative solved problems. The book is suitable for a one-semester undergraduate level course in Signals and Systems, for students in Electronics and Communication, Electrical and Electronics and Computer Engineering programs, as well as Information Technology courses. The book is also valuable for post-graduate students and practising engineers for reviewing the basics of signals and systems. It covers topics ranging from introduction to signals and systems, continuous-time (CT) signals and systems, analysis of linear and time-invariant systems, continuous-time Fourier series, continuous-time Fourier transform, sampling, Laplace transform and Z transform. MATLAB codes for all the chapters are given along with a brief introduction.

Salient Features:

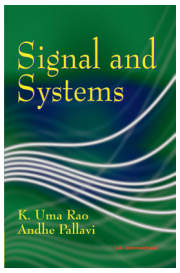
- Precise and easy-to-understand presentation of the subject, with the help of a large number of solved problems.
- Plenty of MATLAB programs included at the end of each chapter
- Additional exercises at the end of each chapter to allow the students to practice further.
- Thorough coverage of the subject from the basics to practical aspects.
- Separate chapters on 'Sampling' & 'Convolution and Correlation'

Contents:

Introduction to signals and systems/Fourier series representation/ Fourier transform/LTI system/Sampling/Convolution and correlation/Laplace transform/Z transform/Appendix: Matlab commands/Index

Audience – B.Tech students of Electronics, Communication, Instrumentation, Computer Science, Electrical and Biomedical Engineering; M. Tech students of Signals & Systems/DSP and IT professionals.

Signals and Systems

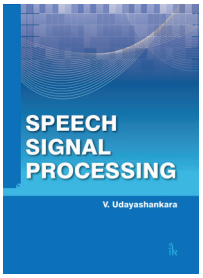


K. Uma Rao
Andhe Pallavi

ISBN: 978-81-89866-89-1/Year 2008
Size 16 cm × 24 cm/Pages 564
Paperback/₹ 545.00

(See on page 64)

Speech Signal Processing



V. Udayashankara

ISBN: 978-93-90620-05-0/Year 2021
Size: 18 cm × 24 cm/Pages 470
Paperback/₹ 695.00

This book is designed for the undergraduate students of Electronics and Communication, Computer Science and Engineering and other allied circuit branches. This book can also be used for Speech signal processing course of postgraduate programmes.

This book presents the subject matter in a simple yet comprehensive manner. It imparts thorough understanding of speech signal processing, starting from basics to different areas of speech processing.

The book first dwells on basic concepts and then elaborates with applications like speech coding, speech & speaker recognition, speech enhancement and speech synthesis.

Salient features

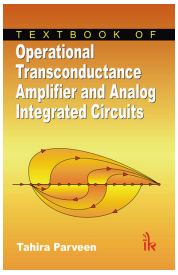
- Provides the basic concepts of digital signal processing with worked examples.
- Covers analysis of speech and applications of speech: speech coding, speech & speaker recognition, speech enhancement and speech synthesis.
- Includes auditory signal processing
- Covers open source software which is used in speech applications.
- Offers review questions at the end of each chapter.

Contents:

Introduction/Fundamentals of Speech Signal/Fundamentals of DigitalSignal Processing/Time Domain Analysis/Spectral and Homomorphic Speech Processing/LPC Analysis/Speech Coding/ Speech Synthesis/Speech Recognition/Speech Enhancement/ Auditory Signal Processing/Speech Processing Chips/Praat and WaveSurfer/Program/Index

Audience – Undergraduate students of Electronics and Communication, Computer Science and Engineering.

Textbook of Operational Transconductance Amplifier and Analog Integrated Circuits



Tahira Parveen

ISBN: 978-93-80026-55-8/Year 2009
Size 16 cm × 24 cm/Pages 296
Paperback/₹ 375.00

This book covers a detailed study of Operational Transconductance Amplifier (OTA) based circuits, their realization and applications. The book is primarily concerned with the building blocks and their applications in linear and nonlinear circuit design, presented in a simplified and methodical way. The book comprises nine chapters, covers important building blocks, ideal and non-ideal component simulators, different types of filters and oscillators, using OTA as the active device. It includes:

- Introduction and Application of an OTA for the realization of the basic building blocks
- Nonlinear applications of OTAs in comparator, zero crossing detector and schmitt trigger circuits
- Realization of ideal grounded as well as floating inductors, resistors, FDNRs and FDNCs
- Realization of non-ideal grounded and floating inductors, FDNRs
- Realization of component multipliers used in instrumentation system and IC fabrication of large valued resistors and capacitors
- OTA-based realizations of the biquadratic functions
- Current mode and voltage mode ladder filter
- Realization and study of electronically tunable sinusoidal oscillators. The book can be used as a reference book by researchers and a textbook for graduate and postgraduate courses in the related to electronic devices or analog filters. It can also be used in other courses related to analog, hybrid signals, circuits and systems etc.

Contents:

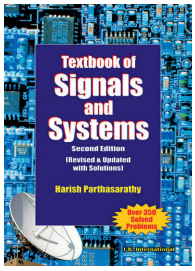
Introduction to Operational Transconductance Amplifier/ Amplifiers and Feedback/Simulation of Ideal Components/Non-Ideal Immittance Simulators/Multipliers and Dividers/OTA-Based Tunable Filters/Architecture and Design of Electronically Tunable Filters/OTA-Based Filters Based on LC Ladders/Electronically Tunable Oscillators/Index.

Audience – Graduate and Postgraduate students in the course related to Electronic Devices or Analog Filters.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Textbook of Signals and Systems

Second Edition



Harish Parthasarathy

ISBN: 978-81-88237-19-7/Year 2006
Size 16 cm × 24 cm/Pages 382
Paperback/₹ 445.00

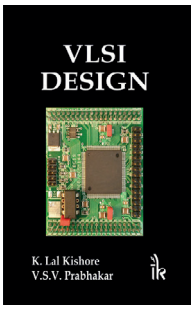
This book is intended as a textbook on "Signals and Systems" for the students of Electronics & Communication Engineering at the undergraduate level. It could be followed in all the engineering colleges where the subject usually forms part of the second year syllabus. In addition it can serve well as a reference book too for clarifying concepts & furnishing more exercises while following simple books like Oppenheim, Willsky and Nawab's book. Apart from being written as a textbook, the nature of presentation of the material and problems is such that it will be useful for undergraduate students wanting to make a transition to postgraduate studies. Those with a bent of mind towards research will definitely find the problems in the book challenging and may even be able to formulate their own research problems along lines suggested by the exercises. There are several aspects in the book to motivate the student to read more advanced text on the subject of signals. A separate section of solutions pertaining to the chapters contained in the book has been also included.

Contents:

Introduction: Signals and their Classification/Systems/Fourier Series/Discrete Fourier Series/Discrete and Fast Fourier Transform/Continuous Time Fourier Transform/The Discrete Time Fourier Transform/The Laplace Transform/The Z-Transform/Shannon's Sampling Theory/Random Signal Theory/Modulation/Index.

Audience – B.E. & B.Tech. in Electronics and Communication Engineering.

VLSI Design



K. Lal Kishore
V.S.V. Prabhakar

ISBN: 978-93-80026-67-1/Year 2009
Size 18 cm × 24 cm/ Pages 416
Paperback/₹ 445.00

Aimed primarily for undergraduate students pursuing courses in VLSI design, the book emphasizes the physical understanding of underlying principles of the subject. It not only focuses on circuit design process obeying VLSI rules but also on technological aspects of Fabrication. VHDL modeling is discussed as the design engineer is expected to have good knowledge of it. Various modeling issues of VLSI devices are focused which includes necessary device physics to the required level. With such an in-depth coverage and practical approach practising engineers can also use this as ready reference.

Salient Features:

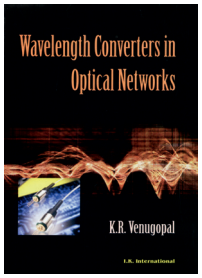
Numerous practical examples/Questions with solutions that reflect the common doubts a beginner encounters/Device Fabrication Technology/Testing of CMOS devices/BiCMOS Technological issues/Industry trends/Emphasis on VHDL.

Contents:

VLSI Fabrication Technology/Basic Electrical Properties of MOS, BiCMOS Devices/VLSI Design Flow/VLSI Circuit Design Process/Gate Level Design/Semiconductor Integrated Circuit Design/Sub-System Design/VHDL Modelling of Digital Systems/CMOS Testing/Issues in Chip Design/Lower power Cmos VLSI/Nanotechnolgy: Electronic Devices/Index

Audience – Undergraduate students pursuing courses in VLSI design.

Wavelength Converters in Optical Networks



K.R. Venugopal

ISBN: 978-81-89866-28-0/Year 2007
Size 16 cm × 24.5 cm/Pages 180
Hardback/₹ 515.00

Salient Features:

- WDMA network architecture models have been presented.
- Literature has been supported and explained with diagrams and tables wherever required, for clear understanding of students.
- Simulation studies in the 12-node ring network, 28-node USA long haul network, 14-node NSFNET, 19-node European Optical Network (EON), 30-node INET network and 52-node arbitrary mesh network have been presented.
- Research activity in network topology recon figuration, issues in fault tolerances, and the objectives of various test beds in progress have been presented.

Contents:

Literature Survey/Performance Analysis of Wavelength Converters/Placement of Wavelength Converters/Limited Wavelength Conversion/Routing and Wavelength Assignment in Wavelength Convertible Networks/Packet Switched Networks with Tunable Wavelength Converters/Conclusions/Summary Contributions of this Work/Future Works/Bibliography/Index.

Audience – Researchers and professionals in Electronics and Communication.

Wireless Communication Systems



Rajeshwar Dass

ISBN: 978-93-81141-97-7/Year 2013
Size 16 cm × 24 cm/Pages 200
Paperback/₹ 325.00

Organized in eight chapters it broadly deals with:

- Evolution of wireless communications.
- Overview of different generations from 1G to 4G of wireless communication.
- Spectrum allocation to the wireless operators, function of ITU, cellular system architecture, types of channels, shape selection of the cell.
- Concept of cellular system design fundamentals like frequency reuse concept.
- Basic multiple access techniques.
- Concept of wireless networking.
- Latest techniques used for enhancing the efficiency of the cellular systems.

Contents:

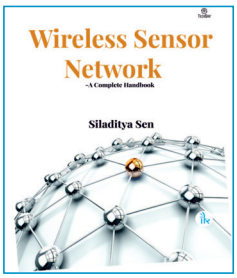
An Introduction to Wireless Communication Systems/Modern Communication Systems/Introduction to Cellular Mobile Systems/Cellular System Design Fundamentals/Multiple Access Techniques for Wireless Communication/Wireless Networking/Advanced Intelligent Networks/Radio Wave Propagation/Index

Audience – Undergraduate & Postgraduate students of Electronics and Communication Engineering.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Wireless Sensor Networks

A Complete Handbook



Prof. Siladitya Sen

Forthcoming

ISBN: 978-93-90620-49-4/ Year 2024
Size: 18 x 24 cm / Pages: TBA
Paperback/₹ TBA

Wireless Sensor Networks (WSNs) can be defined as self-configured and infrastructure-less wireless networks. WSNs monitor physical or environmental conditions, such as temperature, sound, vibration, pressure, motion or pollutants and cooperatively pass their data through the networks to the central location or sink where it can be observed and analysed.

The characteristics of these devices and the operating principles, including those of MEMS (micro-electromechanics system), which are the current trends in sensor devices fabrication, have been discussed.

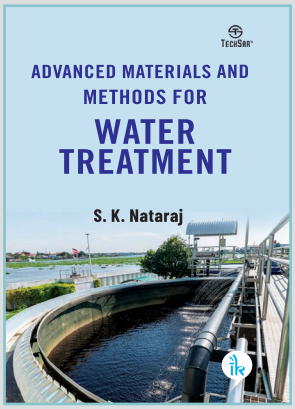
This book is about sensors and their applications in various fields like automobiles, wireless sensor networks, humidity sensing devices, manufacturing and medical applications. Each chapter contains necessary schematic diagrams coupled with three categories of review questions.

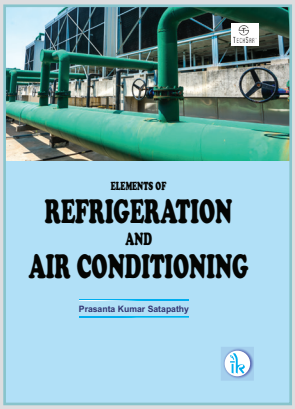
This volume is about sensors and their application in various fields like automobiles, wireless sensor networks, humidity sensing devices, manufacturing, and medical applications amongst others. This book provides presentations of various types of sensors along with transducers that are used in today's industrial scenario. It describes in detail the comprehensive state of present-day technologies.

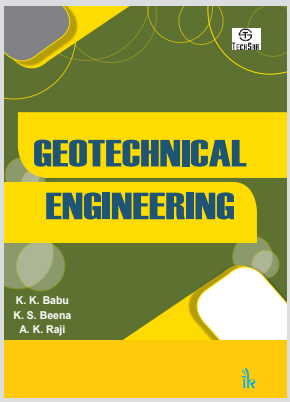
Salient Features

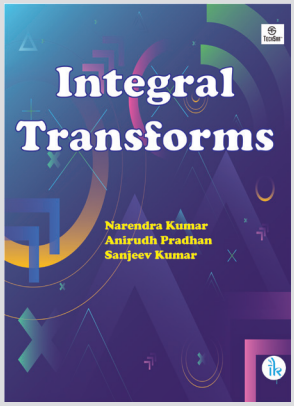
- It highlights all the salient features of a wide spectrum of sensors which primarily includes MEMS, along with its application in medical field, instrumentation, ceramic, and silicon sensors.
- Besides these, technologies like GMR(giant magneto resistance), quartz rotation rate sensors, intrinsic safety devices along with manufacturing industry related sensors have been discussed.
- Each chapter also highlights the Indian Scenario and updates on the effect of pandemic on each application domain.
- The market scenario with growth trends in revenue in both global and domestic market have been been suitably highlighted. As such, this volume is an up-to-date reference for the trending sensor technology.
- The students of engineering will find this volume highly useful for their course work along with guidance for final year projects and seminar work. This will also serve as a pointer to choose their future field of innovation and research work.

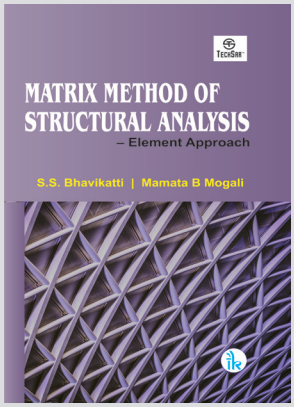
NEW RELEASES

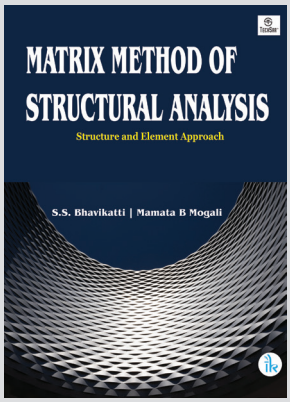








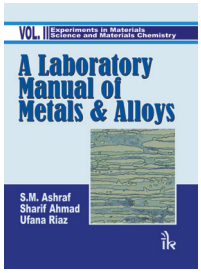




The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

A Laboratory Manual of Metals & Alloys

Volume II Second Edition



S.M. Ashraf
Sharif Ahmad
Ufana Riaz

ISBN: 978-93-80578-11-8/Year 2011
Size 16 cm × 24 cm/Pages 160
Paperback/₹ 295.00

This compendium of twenty laboratory experiments on metals and alloys attempts to provide to students of Science and Engineering an insight about the relationship of the physical, specially mechanical properties of metals with grain structures/microstructures. In almost all the experiments, therefore, the microstructural investigation is provided. Experiments have also been included on the determination of important mechanical and thermal properties and on the aqueous and atmospheric corrosion of metals. Theoretical background of each experiment has been dealt with in good detail in order to enable the student to understand the underlying principles and to appreciate the significance of the experiments.

Information which could not be accommodated in the text of the experiments, has been provided in the form of appendices. These include: reflection microscopy, experimental determination of transition points through cooling curves to get data for plotting phase diagrams, and quenching media for tempering of alloys. In view of the importance of microstructures for some metals and allaoys have also been given.

This book will be useful to the students of materials chemistry and materials science and students of various engineering courses. It will also be helpful to the students of industrial chemistry, practising engineers in metallurgical and mechanical engineering based industries.

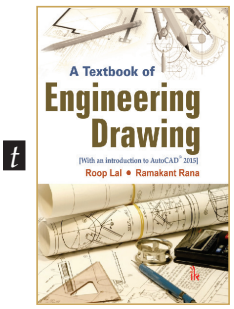
Contents:

To prepare specimens of some metals and alloys for microstructural examination/To find out the grain size and the relative amount of the constituent phases in single phase and 2-phase alloy systems/To determine the tensile strength, modulus of elasticity, yield stress % elongation and % reduction in area of mild steel, brass and aluminium and to observe necking/To determine the impact values of mild steel and grey cast iron/To determine the hardness values of mild steel and brass by Rockwell hardness testing machine/To find out the hardness number of copper and brass using Brinell's hardness testing machine/(i) Construction of phase diagram of the binary eutectic alloy of Pb and Sn. (ii) To observe the microstructure of a few specimens of selected compositions of the above alloy system. Also to find out the shape and size of the grains in these specimens along with the relative amount of the constituent phases. (iii) To find out the hardness of the above specimens/To prepare the peritectic alloy of Cu and Zn of the following compositions and to study their microstructure and hardness/To study the microstructure, grain size and hardness of eutectoid hypo-eutectoid and hypereutectoid steel/To study the microstructure and hardness of annealed and normalized plain carbon steel having 0.4% C and 1.2% C, also to study the spheroidized annealing of 1.2% C steel/To study the mechanical properties and microstructures of some hardened plain carbon steel specimens (0.4%, and 1.2% C) on tempering at different temperatures/To study precipitation strengthening/age hardening of Al-4% Cu alloy/To study the effect of time of tempering on the mechanical properties of high carbon steel/To study the effect of precipitation hardening on Al 4% copper alloy at different temperatures on the hardness of the alloy (alternative method)/To study the effect of cooling rate on the transformation in 0.8% C steel/To study the effect of cold working on the hardness of some selected metals and alloys and also effect of annealing on such cold materials/To study the effect of recovery, recrystallization and grain growth (annealing) in a plastically deformed metal on its microstructure (grain structure) and mechanical properties (hardness)/To evaluate corrosion and corrosion inhibition of mild steel in aqueous environment/To evaluate the rate of high temperature oxidation of iron and also observe the morphology of the oxidized specimens/To determine the amount of lead in brass using Differential Scanning Calorimetry (DSC)/Appendices/Index

Audience – Graduate and postgraduate courses in materials science, materials chemistry and industrial chemistry.

A Textbook of Engineering Drawing

[Along with an introduction to AutoCAD® 2015]



Roop Lal
Ramakant Rana

ISBN: 978-93-84588-68-7/Year 2015
Size 18 cm × 24 cm/Pages 452
Paperback/₹ 445.00

This book is meant for the first-year engineering students of all branches. It covers the complete syllabus of Engineering Drawing (Graphics) of various technical universities. Any engineer, irrespective of his branch requires the basic knowledge of design and graphics in order to understand the elements of a product and the manufacturing process. It provides a comprehensive and practical overview of engineering graphics through simple and well-explained examples along with an ample number of unsolved problems. The book is fragmented in17 chapters and contains in depth information on various topics discussed in the respective chapters. Mostly, first angle of projection has been followed while solving problems but in some problems third angle of projection has also been used purposely to explain the concept to the students.

The book is linked with a website www.engineersdrawing.com which will behave as an online portal for students. This website also contains solutions to all the unsolved problems in the book. Every chapter has a unique uniform resource locator (URL), mentioned under the name of each chapter, which simplifies the search for the students.

Salient features:

- Latest BIS Codes are used in (SP46-2003).
- A chapter on AutoCAD (AutoCAD 2015) for engineering drawing (graphics).
- The online content is an addition to this book for better understanding and further doubt clearance will also be available on website.
- Solutions to all the unsolved questions will be explained chapter-wise on "www.engineersdrawing.com".
- Examples are explained in a student-friendly method which includes "Step-by-Step" approach.
- The book contains the chapter-end exercises to help students develop their skills.

Excellent Pedagogy:

- More than 360 solved examples
- Large number (666) of illustrative drawings
- More than 440 review questions (unsolved)

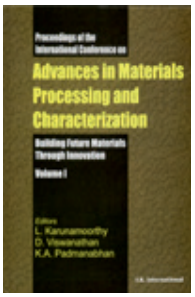
Contents:

Basics of Engineering Drawing/Sheet Layout/Conventions/Lettering/Scales/Geometrical Constructions/Projections: An Introduction/Projections of Points/Projection of Lines/Projection of Planes/Projections of Solids/Sections of Solids/Development of Surfaces/Isometric Projections/Engineering Curves/Intersection of solids/Basics of Autocad® 2015/Index

Audience – All engineering students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Advances in Materials Processing and Characterization



Building Future Materials Through Innovation

Two Volume Set

Editors
L Karunamoorthy
D. Viswanathan
K.A. Padmanabhan

ISBN: 978-81-88237-68-5/Year 2006
Size 18.5 cm × 25 cm/Pages 1132
Hardback/₹ 3995.00

Contents:

Volume One:

Keynote and Invited Papers/Advanced Materials/Characterization of Materials/Machining/Machining of Composites/Unconventional Machining of Materials/Metal Forming/Metal Joining/Fracture and Fatigue

Volume Two:

Friction and Wear/Rapid Prototyping/Casting/Modeling and Optimization/Heat Treatment/Vibration/Biomedical Applications of Materials/Related Topics.

Audience – Mechanical Engineering, Materials Engineering.

Agile Manufacturing



Globalised Customized Green Products

M P Chowdiah

ISBN: 978-93-81141-58-8/Year 2012
Size 18 cm × 24 cm/Pages 300
Hardback/₹ 1295.00

Agile manufacturing is a revolutionary approach which opens up a new pathway in designing and implementing manufacturing systems using new and emerging technologies and organizational managements, that is, management, technology, workforce to achieve the goals of competitive advantage. It is a continuous driving enterprise involving a quantum leap in our current thinking about manufacturing systems; development of the needed capability to respond to the demands of highly customized products of high quality. Agile manufacturing calls for integration of management, highly skilled and knowledgeable methods to penetrate highly competitive and dynamic niche market environments to successfully achieve world-class performance, even outperforming the best of competitors. All these requirements are mutually interdependent and hence we need a formidable strategy not only to become agile but also to exploit and dominate that agility. We concurrently need new productive skills and knowledge-enhancing research-based technologies so crucial to support the futuristic manufacturing systems without any traditional barriers that would frustrate profitable deployment of the system.

The present book discusses all the aspects related to agile manufacturing. Broadly, it covers its advantages, applications, inputs and outputs, importance, core concepts and certain case studies to prove the point.

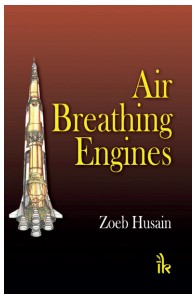
This book will be highly useful for industries, engineering students, practising engineers, and people involved in industrial and business management.

Contents:

Products Development - The New Imperative/Standardzation - Steps and Prerequisites/Globalization of Product Design/Manufacturing Competativeness - The New Phase/Concurrent Engineering (C.E)/Ideal Producton Synchronized Manufacturing etc/Agile Manufacturing/Agile Manufacturing - The Advent of A New Frontier/Agile Manufacturing - A 21st Century Paradigm/Agile Manufacturing Implies Revolutionary Changes/Advantages and Applications of Agile Manufacturing/Agile Manufacturing Needs Many Inputs/Agile Manufacturing Needs Many Outputs/Customization/Japans Just-In Time Production (Jit)/Benefits of Agile Manufacturing/How Vital is Resources Effeciency?/Green Engineering/ Globalization Calls for Training of Personal etc/Several More New Aspects in The Fore/Some Successes of Agile Manufacturing in India and Abroad.

Audience – Teachers and Students of Manufacturing Engineering.

Air Breathing Engines



Zoeb Husain

ISBN: 978-93-80026-89-3/Year 2010
Size 16 cm × 24 cm/Pages 272
Paperback/₹ 395.00

The book deals with the theory of air breathing engines or more precisely aircraft engines. These engines take air from the atmosphere, accelerate and produce thrust to the aircraft. Gas turbine forms the basic unit and is gas generator. The components of the gas turbines are given in detail. It is a machine based on which is developed Turbo Prop and Turbo Jet Engines. Rocket has been considered non-breathing engine. The book will be useful for Aeronautical Engineering students. The book contains worked out examples taken from the data of leading aircraft manufacturers.

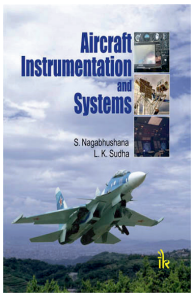
The book will be suitable for Mechanical Engineering, Aerospace and Aircraft Engineering courses. The space scientist and students working for space travel can also benefit from this book. The book will offer working knowledge of the operation of the aircraft to engineers in this area.

Contents:

Basic Thermodynamics/Fundamentals of Dynamics/Gas Turbine/Turboprop Engine/Turbofan Engine/Turbojet Engine/Rockets/Rocket Technology/Index.

Audience – Student of Mechanical Engineering, Aerospace and Aircraft Engineering.

Aircraft Instrumentation and Systems



S. Nagabhushana
L.K. Sudha

ISBN: 978-93-80578-35-4/Year 2010
Size 24 cm × 18 cm/Pages 410
Hardback/₹ 1295.00

Aircraft Instrumentation and Systems has the adequate coverage to deal generally the topics for undergraduate course on Aircraft Instrumentation. It covers: An introduction to aircraft instruments and systems, air data systems and air data computers, navigation systems, gyroscopic flight instruments, Engine instruments, electronics flight instrument systems, Safety and warning systems. Every effort has been made to update the contents of the book to the present-day technology used in modern transport category aircraft manufactured by Boeing and Airbus industry.

The text is profusely illustrated with block and, schematic diagrams and a large number of tables and glossary. Problems have been included at the end of the each chapter for practice and self-study. The book is intended for teaching and study the topic for students of B.E., M.E. and students in Instrumentation Technology and Aircraft

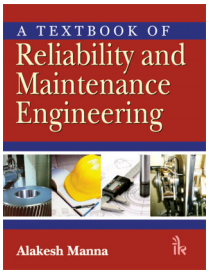
Engineering. It also introduces the subject to practising engineers and readers interested in aircraft instrumentation and to the flight crew.

Contents:

Basics of Aircraft/Aircraft Instruments/Air Data Instrument/ Directional Systems/Gyroscopic Flight Instruments/Engine Instruments—Power and Thrust/Engine Fuel Indicators/Electronic Flight Instrument System (EFIS)/Aircraft Navigation Systems/ Automatic Flight Control System (AFCS)/Airborne Radars/Flight Management Systems (FMS)/Aircraft Communication Addressing and Reporting System (ACARS/ATN) and Future Air Navitation (FAN)/Black Boxes (Cockpit Voice Recorder and Flight Data Recorder)/Aircraft Safety and Warning Systems/Appendices/Index.

Audience – Students of B.E., Instrumentation Technology and Aircraft Engineering.

A Textbook of Reliability and Maintenance Engineering



Alakesh Manna

ISBN: 978-93-80578-92-7/Year 2011
Size 16 cm × 24 cm/Pages 420
Hardback/₹ 545.00

This text book on Reliability and Maintenance Engineering has been prepared considering the syllabuses of all technical universities for their BE and ME courses. This book also fulfill the requirement of the University and College Teachers; Engineers, Technical Supervisors and Staff who are directly engaged in the industry.

Salient features:

- Traditional and modern concept, importance, function of Maintenance Engineering,
- Organizational Setup and Record Keeping in maintenance,
- Corrosions,
- Safety in Maintenance,
- Various hazards and Fault Tree Analysis,
- House Keeping Practice in Maintenance,
- Incentive Payments for Maintenance Workers,
- Reliability and Availability of Engineering Systems,
- Computerized Maintenance Information Systems,
- Total Productive Maintenance,
- Maintenance Aspect: Lubrications,
- Inspection and Testing in Maintenance Engineering,
- Assets Management; Lean Maintenance and Application of Different Techniques in Maintenance,
- Manpower Planning and Training,
- Fault Diagnosis and Condition Monitoring,
- Spare Parts Management and Quality Control in Maintenance,
- Budgets and Cost Aspect of Maintenance,
- Maintenance Effectiveness; Performance Evolution and Audit,
- Maintenance of Mechanical, Electrical, Process and Service Equipments,
- Machine Failure; Development of Preventive Maintenance Schedule; Breakdown Time Distribution and Trouble Shooting.

With all these above mentioned features the author is quite confident with feeling that the book will fulfill the demands and needs of maintenance engineers and students.

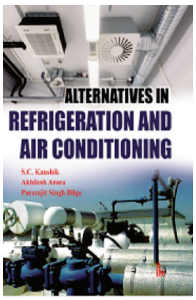
Contents:

Concept of Maintenance Engineering/Organizational Setup and Record Keeping/Corrosion/Safety in Maintenance/House Keeping Practice in Maintenance/Incentive Payments for Maintenance Workers/Reliability and Availability and Engineering Systems/ Computerized Maintenance Information Systems/Total Productive Maintenance/Maintenance Aspect: Lubrications/Inspection and Testing in Maintenance Engineering/Assets Management, Lean Maintenance and Application of Different Techniques in Maintenance/ Manpower Planning and Training/Fault Diagnosis and Condition Monitoring/Spare Parts Management and Quality Control in Maintenance/Budgets and Cost Aspect of Maintenance/Maintenance Effectiveness, Performance Evaluation and Audit/Maintenance of Mechanical, Electrical, Process and Service Equipment/Machine Failure, Development of Preventive Maintenance Schedule, Breakdown Time Distribution and Troubleshooting.

Audience – Students of BE, ME, Teachers, Engineers, Technical Supervisors

Shelving: Mechanical Engineering

Alternatives in Refrigeration and Air Conditioning



S.C. Kaushik
Akhilesh Arora
Paramjit Singh Bilga

ISBN: 978-93-84588-38-0/Year 2016
Size 18 cm × 24 cm/Pages 420
Hardback/₹ 1995.00

Alternatives in Refrigeration and Air conditioning highlights the issues related to ozone layer depletion and global warming due to use of conventional cooling technologies and refrigerants in the field of Refrigeration and Air Conditioning (RAC). It describes, simulates and analyzes the alternate technologies and alternate refrigerants from energy and exergy point of view. The unconventional and alternative refrigeration technologies viz. Vapor Absorption Refrigeration, Vapor Adsorption Refrigeration, Evaporative Cooling, Desiccant Cooling, Thermoelectric Refrigeration, Thermo Acoustic Refrigeration, Ejector Cooling, Vortex Tube Refrigeration Systems and Metal Hydride Refrigeration etc. are explored in the subject matter of this book. The combined or integrated approach of some technologies to enhance the performance, waste heat utilization or to increase the arena of its use is also discussed. This book will cater to the needs of the RAC community from the point of view of feasible futuristic options in this area. This book will also serve as a text book for postgraduate students especially of thermal and energy engineering stream and useful to the teachers, researchers, and practicing engineers.

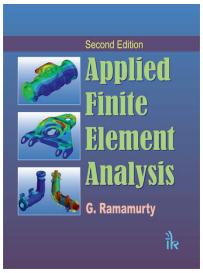
Contents:

Introduction/Alternate Refrigerants and Cycles for Compression Refrigeration Systems/Vapour Absorption Cooling and Advanced Absorption Cycles/Compression-Absorption Combined Cooling Systems/Use of Ejector in Refrigeration and Air Conditioning/ Vortex Tube Refrigeration Systems/Thermoelectric Refrigeration/ Thermoacoustic Refrigeration/Vapour Adsorption Systems: Physisorption and Chemisorption Systems/Evaporative and Desiccants based Air conditioning Systems/References/Index

Audience – Undergraduate and Graduate students of Engineering, Teachers, Researchers, and Practicing engineers.

Applied Finite Element Analysis

Second Edition



G. Ramamurty

ISBN: 978-93-80578-45-3/Year 2010
Size 18 cm × 24 cm/Pages 448
Paperback/₹ 425.00

This book is presents the basic concepts of Finite Element Analysis applied to several engineering applications.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Salient Features:

1. Covers several modules of elasticity, heat conduction, eigenvalue and fluid flow analysis which are necessary for a student of Mechanical Engineering.
2. Finite Element formulations have been presented using both global and natural coordinates. It is important for providing smooth transition form formulation in global coordinates to natural coordinates.
3. Special focus has been given to heat conduction problems and fluid flows which are not sufficiently discussed in other textbooks.
4. Important factors affecting the formulation have been included as Miscellaneous Topics.
5. Several examples have been worked out in order to highlight the applications of Finite Element Analysis.

Contents:

Introduction/One-dimensional Elasticity Problems/Analysis of Truss/Analysis of Beams/Steady State Conduction Heat Transfer/ Unsteady State Heat Condition/Two Dimensional Problems of Elasticity/High Order Elements/Steady, Inviscid, Incompressible Flows and Torsion Analysis/Eigenvalue Problems/Three Dimensional Elasticity Problems/Dynamic Analysis/Non-linear Analysis/Bending of Thin Plates/Miscellaneous Topics/Short Questions and Answers/Answers to Selected Problems/Appendix/ References/Index.

Audience – Students of B.E./B. Tech.

Analysis and Design of Machine Elements

Second Edition



V.K. Jadon
Suresh Verma

ISBN: 978-93-84588-10-6/Year 2015
Size 18 cm × 24 cm/Pages 1000
Paperback/₹ 745.00

The book covers fundamental concepts, description, terminology, force analysis and methods of analysis and design. The emphasis in treating the machine elements is on methods and procedures that give the student competence in applying these to mechanical components in general. The book offers the students to learn to use the best available scientific understanding together with empirical information, good judgement, and often a degree of ingenuity, in order to produce the best product. Few unique articles e.g., chain failure modes, lubrication of chain drive, timing belt pulleys, rope lay selection, wire rope manufacturing methods, effect of sheave size etc., are included. Friction materials are discussed in detail for both wet and dry running with the relevant charts used in industry. Design of journal bearing is dealt exhaustively.

Salient Features:

- Compatible with the Machine Design Data Book (same author and publisher).
- Thorough treatment of the requisite engineering mechanics topics.
- Balance between analysis and design.
- Emphasis on the materials, properties and analysis of the machine element.
- Material, factor of safety and manufacturing method are given for each machine element.
- Design steps are given for all important machine elements.
- The example design problems and solution techniques are spelled out in detail.
- Objective type, short answer and review problems are given at the end of each chapter.
- All the illustrations are done with the help of suitable diagrams.
- As per Indian Standards.

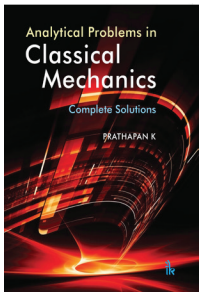
Contents:

Preface/Concepts and aspects of design/Materials for design/ Manufacturing and statistical considerations/Design for uniaxial static loading/Design for combined loading and theories of failure/ Design of stress concentration and fatigue/Cotter and knuckle joints/ Line shaft/Keys and couplings/Design of threaded fasterners/ Riveted joints/Welded joints/Power screws/Belts/Chains/Pulleys/ Wire ropes/Springs/Clutch/Brakes/Gear fundamentals/Gear design/Worm and worm wheel/Bearing and lubrication/Rolling element bearing/Levers/Flywheel "Pipe and Pipe Joints" and "Internal Combustion Engines"/Index.

Audience – Mechanical Engineering Students.

Analytical Problems in Classical Mechanics

Complete Solutions



Prathapan K

ISBN: 978-9386768-18-6/Year 2019
Size 18 cm x 24 cm/Pages 526
Paperback/₹ 675.00

In the book, each formulation of classical mechanics is divided into different chapters and theory notes are given at the beginning of each chapter. Most of the classical problems are discussed in detail for understanding the applications of various formulations. Some problems are discussed in all formulations which will help the reader to make a comparison among various formulations. A large number of problems are selected from various university examinations as well as from competitive examinations like NET, JEST, GATE and Civil Service. This book will also be helpful to the students preparing for such examinations. Also, a large number of practice problems are given at the end of each chapter.

Salient Features

- Application of various formulations of classical mechanics.
- Theory notes.
- Problems discussed in all formulations.
- Classical problems with applications of various formulations.

Contents:

Foundations of Mechanics/Lagrangian Formulation/Hamiltonian Formulation/Canonical Transformation and Poisson Brackets/ Hamilton – Jacobi Formulation and Action – Angle Variables/Small Oscillations/Scattering and Rigid Body Dynamics/Index

Audience – PG and UG students, competitive examinations like NET, JEST, GATE and Civil Services.

Applied Thermodynamics

Revised 7th Edition

R Yadav • Sanjay • Rajay

ISBN: 978-93-90620-94-4/Year 2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

Forthcoming

Applied Thermodynamics deals with engineering systems and devices which are designed using the laws and principles of basic engineering thermodynamics and deliver power output, pressure rise, kinetic energy rise, thrust, cooling and heating effects depending upon the use of systems and devices under operation.

Starting with review of basic engineering thermodynamics, the book goes on to discuss steam generators including draft needed and performance, steam engines, internal combustion engines and

their testing and performance, positive displacement and dynamic compressors, nozzles and diffusers, steam turbines, condensers and cooling towers, gas turbines and their components, jet propulsion, lubrication, nuclear engineering; and combined, co-generation, and mixed cycle power plants.

The book is suitable as Text for B.E/ B. Tech of Mechanical, Production, and Aeronautical Engineering students appearing in university, UPSC and GATE examinations.

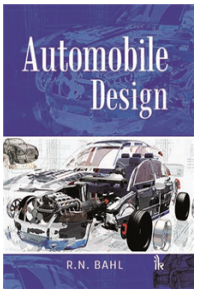
Salient Features:

- An exhaustive treatment of theory and design aspects with the diagrammatic presentations had been attempted throughout the book.
- Case studies of real systems has been discussed.
- A summary of formulae has been given at the end of each chapter.
- A large number of typical and real-life problems in each chapter.

Audience: B.E & B.Tech students

Shelving: Mechanical Engineering

Automobile Design



R.N. Bahl

ISBN: 978-93-86768-19-3/Year 2019
Size 18 cm x 24 cm/Pages 790
Paperback/₹ 825.00

Automobile Design is meant for B.Tech Automobile, Mechanical, AMIE, U.P.S.C. and other competitive examinations. The syllabus of various universities of courses has been covered. To illustrate the application of the theoretical concepts, a variety of solved examples is presented in the end of each chapter which is followed by some problems for practice. The design of the I.C. engine has been covered separately for gasoline (petrol) and diesel engines as both engines have some specific requirements which has been elaborated in details. The book includes of two parts, Part I deals with the design of mechanical components of automobile which is covered in 21 chapters. Part II consists of 5 chapters which deal with the design of electrical components of automobile to the extent required for automobile and mechanical engineering students.

Salient Features:

- Covers two-semester course material for UG in automobile engineering and Section B of AMIE (India), and mechanical engineering.
- Presents the theoretical aspects in detail substantiated with illustrated worked examples.
- Helps the beginners to build up the concepts and amplify understanding of the concepts.
- Theoretical aspects with sketches, theoretical derivations and fundamentals adequately explained.
- Practical application problems covered with Indian Standard Specification.

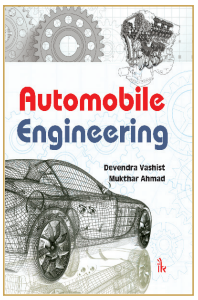
Contents:

Introduction/Automobile Chassis/Suspension/Automobile Body/ Design of Petrol Engine and its parts/Design of Diesel Engine and its parts/Flywheel/Carburetor/Fuel-Injection System/Supercharging/ Clutch/Transmission/Steering/Brakes/Vehicle vibrations/Vehicle performance/Governors/Automotive Gas Turbine/Design of miscellaneous parts of automobile/Antifriction bearings/Automobile air conditioning/Introduction/Charging system/Vehicle starting system/Ignition/Lighting system

Audience – B.E., B.Tech and M. Tech students of Mechanical Engineering and Automobile Engineering.

Shelving – Mechanical Engineerings

Automobile Engineering



Devendra Vashist
Mukthar Ahmad

ISBN: 978-93-84588-64-9/Year 2017
Size 18 cm × 24 cm/Pages 410
Paperback/₹ 495.00

Automobile Engineering deals with the basic principles on which modern automobiles function. It provides minute details of the components, their working principles and importance in the automobile industry. The language of the book is kept very simple so that any student/automobile enthusiast can easily understand the basic concepts of the components utilized in the manufacturing of vehicles. The book includes, clutches, transmission, drive line suspension, steering, brakes, wheels, tyres, emission control, electrical and fuel supply systems, air conditioning, cooling and lubrication along with general maintenance. The book will help the students of automobile engineering/mechanical engineering to gain a thorough understanding of the complete chassis. Efforts have been made to describe the latest technologies and developments in the automobiles.

Salient Features:

- Three-dimensional diagrams to identify the component and understand its applicability, while 2D figures are provided to understand the principles behind their working and can easily draw figures on their own
- Selected questions on theory have been given at the end of each chapter.
- Questions of viva voice/objective type and previous years' questions have been provided.

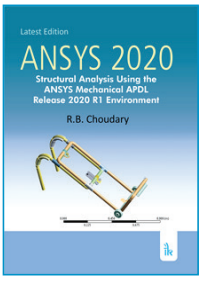
Contents:

Introduction/Clutches/Gear Box (Transmission)/Drive Line/ Suspension Systems/Steering Systems/Automotive Brakes, Tyres and Wheels/Emission Control System and Automotive/Fuel Supply System/Automobile Air Conditioning/Cooling and Lubrication System/Maintenance and service/Advanced Vehicle Technologies/ Index

Audience – UG and PG students of Automobile Engineering and Mechanical Engineering; practising automobile engineers.

ANSYS 2020

Structural Analysis Using the ANSYS Mechanical APDL Release 2020 R1 Environment



R B Choudary

ISBN: 978-93-90620-46-3/Year 2021
Size: 18 cm × 24 cm/Pages 320
Paperback/₹ 895.00

ANSYS is a large and complex program with many different capabilities. This book is intended to help the new ANSYS user in getting started. The four chapters in this book introduce the reader to effective finite element problem solving by demonstrating the use of the comprehensive ANSYS FEM software in a series of step-by-step tutorials. The contents include ANSYS Basics, ANSYS Operations, Modeling and Meshing and Structural Analysis. This revised edition provides its reader with up-to-date information on ANSYS software.

Salient Features:

- The first chapter on ANSYS Basics deals with the finite elements method, mechanical APDL environment, running the ANSYS program, GUI, graphical picking, customizing the GUI, using the ANSYS session and command logs.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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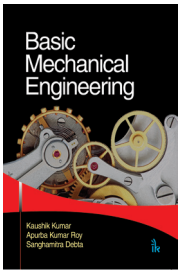
- The second chapter on ANSYS Operations deals with getting started, loading, solution, post processing, general postprocessor, time-history postprocessor, selecting the components, creating graphs, annotation, animation, documenting the analysis, typical modeling difficulties, and the mechanical toolbar.
- An exclusive treatise on modeling and meshing is given in the third chapter, Modeling and Meshing, which includes model generation, planning the approach, coordinate systems, working planes, solid modeling, importing solid models, generating the mesh, revising the model, direct generation, and number control and element reordering.
- Problems on linear static structural analysis are presented in Chapter 4, Structural Analysis, in which the problems are categorized based on their dimensionality. The 2D problems are grouped into trusses, beams, planes and frames. The 3D problems are dealt under the headings solids and space.

Contents:

ANSYS Basics/ANSYS Operations/Modeling and Meshing/Static Structural Analysis

Audience – B. Tech Students/M.Tech Students/Researchers.

Basic Mechanical Engineering



Kaushik Kumar • Apurba Kumar Roy
Sanghamitra Debta

ISBN: 978-93-85909-68-9/Year 2017
Size 18 cm × 24 cm/Pages 394
Paperback/₹ 595.00

The book starts with the law of forces, free-body diagrams, basic information on materials strength including stresses and strains. It further discusses principles of transmission of power and elementary designs of gears, spring, etc. This part concludes with mechanical vibrations, — their importance, types, isolation and critical speed.

The second part, Thermal Engineering, deals with basics and laws of thermodynamics; pure substances and their properties. It further includes laws of heat transfer, insulation, and heat exchanges. This part concludes with a detailed discussion on refrigeration and air conditioning.

Part three, Fluid Mechanics and Hydraulics, includes properties of fluids, measurement of pressure, Bernoull's equation, hydraulic turbine, pumps and various other hydraulic devices.

Part four, Manufacturing Technology, mainly deals with various manufacturing processes such as metal forming, casting, cutting, joining, welding, surface finishing and powder metallurgy. It further deals with conventional and non-conventional machining techniques, fluid power control and automation including hydraulic and pneumatic systems and automation of mechanical systems.

Part five, Automobile Engineering deals with various aspects of IC and SI engines and their classification, etc. Four- and two-stroke engines also find place in this section. Next, systems in automobiles including suspension and power transmission systems, starting, ignition, charging and fuel injection systems.

The last section deals with power plant engineering and energy. It includes power plant layout, surface condensers, steam generators, boilers and gas turbine plants. It concludes with renewable, non-renewable, conventional and non-conventional sources of energy, and energy conversion devices.

Salient Features:

- Treatment of topics at depth with large number of solved problems, diagrams in every chapter
- Inclusion of section-end multiple choice questions and book-end model questions for ample practice
- Glossary containing all the important terms with their definitions at the end of the book

Contents:

Section I- Mechanical Engineering: 1. Engineering Mechanics/2. Strength of Materials/3. Machine Design/4. Vibrations

Section II-Thermal Engineering: 5. Introduction to Thermodynamics/6. Introduction to Heat Tansfer/7. Introduction to Refrigeration and Air Conditioning

Section III-Fluid Mechanics and Hydraulics: 8. Fluid Mechanics/ 9. Introduction to Hydraulic Machines

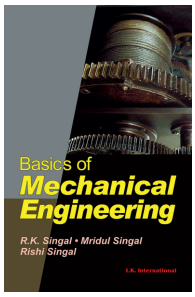
Section IV-Manufacturing Technology: 10. Introduction to Manufacturing Processes/11. Conventional Machining Techniques/12. Non-conventional Machining Techniques/13. Introduction to Fluid Power Control & Automation

Section V Automobile Engineering: 14. I.C Engines/15. Systems in Automobiles

Section VI- Power Plant Engineering: 16. Introduction to Power Plant Engineering/17. Energy/Glossary /Index.

Audience – BE & BTech students.

Basics of Mechanical Engineering



R.K. Singal • Mridul Singal
Rishi Singal

ISBN: 978-81-89866-20-4/Year 2007
Size 16 cm × 24 cm/Pages 624
Paperback/₹ 495.00

Basics of Mechanical Engineering systematically develops the concepts and principles essential for understanding engineering thermodynamics, mechanics and strength of materials. This book is meant for first year B.Tech. students of various technical universities. It will also be helpful for candidates preparing for various competitive examinations.

Salient Features:

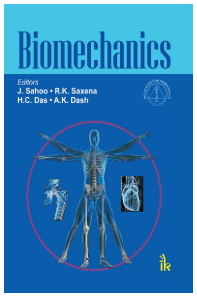
- Each chapter includes problems selected from university examination papers and question banks.
- Exhaustive question bank on theory problems at the end of each chapter.
- Includes all supplementary material required by the students like steam tables, section modulus.
- A large number of illustrative diagrams support the text, wherever required.
- S.I. Units used throughout.
- Each chapter has been summed up in easy to recall points.

Contents:

Part I, Thermodynamics: Fundamental Concepts and Definitions/ Laws of Thermodynamics/Properties of Steam/Internal Combustion Engine/Part II, Force and Structure Analysis (Engineering Mechanics): Force and Equilibrium/Friction/Beam/Trusses/Part III, Stress and Strain Analysis (Strength of Materials): Simple and Compound Stresses and Strains/Bending and Torsion/Annexures/Index.

Audience – First year B.Tech. students of technical universities.

Biomechanics



J. Sahoo • R. K. Saxena
H. C. Das • A. K. Dash

ISBN: 978-93-82332-86-2/Year 2014
Size 22 cm × 28 cm/Pages 292
Paperback/₹ 1495.00

Biomechanics is an interdisciplinary area where the knowledge and methods of mechanics are applied to the structure and function of the living human system. It integrates biological

systems by means of mechanical principles for the improvement of performances, prevention and alleviation of injury by qualitative and quantitative analysis.

The aim of this book is to disseminate recent developments in the field of Biomechanical Sciences to the students, researchers, teachers, sports scientists, physiotherapists and orthopaedic surgeons, to enhance their skills and methodologies for research and development critically and optimally. The book will also help generate a dedicated team of researchers and teachers in Biomechanics to enhance the progress in the basic knowledge, research and facilities, so the resources can be pooled together and duplication of research work can be avoided.

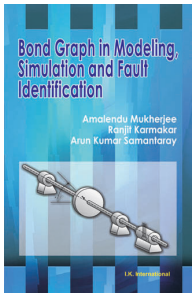
Forty-six articles reflecting almost all areas of biomechanical sciences by eminent scientists and experts on Biomechanics have been presented in the present compendium. It will also pave way for the young scientists for the research for futuristic research work and develop improved methodologies.

Contents:

Determination of axial and transverse stiffness of joshi external stabilizing system by experimental/ergonomic evaluation and economics of improved harvesting technology for farm women in odisha/development of pulsatile cardiovascular flow simulator and assessment of flow through stenosed blood vessel/Mechanical analysis of cause production of deformities in case of perthes' disease of hip/Ergonomic evaluation of different length sweeping brooms in indian women/Role of CAD/CAM for development of tailor-made knee implant/Study of the biomechanical performance of implants used for fixation of fractured trochanter/Prediction of peak expiratory flow associated with human respiratory mechanics using spirometric investigations/Biomechanical significance of ankle and foot in human life/Mechanical advantages of curvilinearity of bones/Biomechanical analysis and treatment of Congenital Talipes Equino Varus (CTEV)/ Relationship of human gait speed with selected anthropometric variables among indian adults/Development of an EMG based smart functional electric stimulator/Effect of vibration on implant used for fracture fixation of bone/Ergonomic advice for physical exercises to indian women during kitchen work for the prevention of musculoskeletal disorders/Modulatory effects of lead on morphology, mineralogy and mechanical properties in weight bearing bones of Rat/Solid model generation of knee joint and alignment analysis in Total Knee Arthroplasty (TKA) in Obese Patient: A Finite Element/ Biomechanical analysis of successful and unsuccessful penalty corner push-in/Using CFD as a tool for analysis of endodontic irrigation: maxillary and mandibular teeth cases/Study of shoulder range of motion of tennis players by video motion analysis and goniometer/ gait analysis of ankle joint forces using force platform/A study on working posture and musculoskeletal issues of Indian medical laboratory technicians/Study of pennes bioheat equation and its application to cryosurgical freezing of tumors/A correlation study on fractals extracted during fatigue and non-fatigue condition with anthropometric data/Finite element analysis of segmental cervical spine facet strain and disc stress after total disc replacement/Forces analysis of foot and ankle during stance phase/Biomechanical analysis of crutch gait/Ergonomic evaluation of welders and crane operators in steel industry/Radiographic image based analysis of trabecular architecture in human femur bones using lacunarity/Correlation of Muscle Work with Hand Dexterity in Dental Surgeons/Ergonomics and human factors at work/Study of mechanical characteristic of femur and implants under different loading pattern/To compare cervical spine and glenohumeral range of motion & scapular stability between patients with Levator Scapulae Syndrome (LSS) and matched normal subjects/Effect of fatigue on hand dexterity and reaction time/Modeling of lung diseases: A review/Analysis of breast thermograms using wavelet based structural texture features/ Hip implantation: modeling & analysis/Autonomic reactivity variables of indian sportspersons withdrawn from power events/ Role of mechanical factor in cause production of avascular necrosis of capital femoral epiphysis in perthes' disease of hip/Cricket ball impact on human brain simulation using finite element and impact biomechanics methods/Verification of the hagen-poiseuille flow in cardiovascular system of humans: a numerical analysis/Study of the mechanical behaviour of tibia subjected to complex loading/A review on stump-socket interface pressure distribution/Comparison between bowling workload, strength ratios and quality of life in fast bowlers with and without shoulder injuries/Study of stress distribution and deformation of tooth and dental implant under compressive loading: A 3D finite element analysis/'pTwisle': A pneumatic twisting actuator

Audience – Students, researchers, teachers in Biomechanical Sciences and sports scientists, physiotherapists and orthopaedic surgeons.

Bond Graph in Modeling, Simulation and Fault Identification



Amalendu Mukherjee
Ranjit Karmakar Arun Kumar Samantaray

ISBN: 978-81-88237-96-8/Year 2006
Size 16 cm 24 cm/Pages 644
Paperback/₹ 595.00

Bond graphs have become a part of undergraduate and postgraduate curricula at IITs and engineering institutes. Many industries, organizations, universities and academic institutions have included bond graphs in their research, development and design activities. In recent years, the range of applications of bond graphs has enhanced owing to sustained research in this field.

It is organised into 16 chapters and is narrative in style to make it easily comprehensible to the students. Each chapter is appended with a set of problems divided into two groups; problems to be solved by students for usual practice and project-type problems.

Contents:

Introduction/Notion of Causality/Creation of System Equations/ Creation of System Bond Graph/Use of Noninertial Coordinates/ Systems with Non-potential Fields/Structural Members/Modeling of Multibody Systems/Multi Bond Graphs/Modeling of Thermal Systems/ Hydraulic Systems/Approaching Control Systems/Control Strategies in Physical Domains/Modeling of Electronic Circuits/Fault Detection and Isolation/Examples of Modeling and Simulation/Appendix: SYMBOLS Software Overview/Bibliography/Index.

Audience – B.Tech and M.Tech students.

Computational Fluid Dynamics and Heat Transfer



S. Thanigaiarasu

ISBN: 978-93-86768-84-1/Year 2020
Size: 18 × 24 cm/Pages 342
Paperback/₹ 495.00

Computational Fluid Dynamics and Heat Transfer is meant for undergraduate and postgraduate students, research scholars and teaching community of Aerospace Engineering and Mechanical Engineering. This book explains the fundamentals of heat transfer and focuses mainly on finite difference method, which is one of the computational methods used to solve engineering problems. The major strength of the book is that it covers one-dimensional, two-dimensional steady and transient conduction and convection problems in detail. This book will definitely be highly useful for those who wish to understand the finite difference method for solving fluid flow and heat transfer problems for their research and industrial applications..

Salient Features:

- A very comprehensive and accessible approach in the presentation of the material.
- Step-by-step description of mathematical formulations.

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info@ikinternational.com

- A variety of unsolved problems for practice at the end of each chapter.
- Explanation of all the concepts, with examples.

Contents:

Solutions to Simultaneous Linear Algebraic Equations/Governing Equations for Fluid Flow and Heat Transfer/Numerical Applications of Computational Fluid Dynamics/Grid Generation/An Introduction to Heat Transfer/Finite Difference Formulation for Heat Transfer Applications/Finite Difference Formulation for Transient Heat Conduction/Finite Difference Formulation for Convective Heat Transfer/Numerical Methods for Radiation/Computer Programming/References/Index

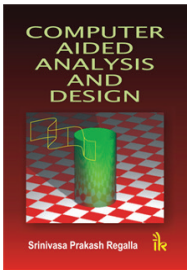
Audience – Undergraduate and postgraduate students and research scholars.

Computer Aided Analysis and Design

Srinivasa Prakash Regalla

ISBN: 978-93-80026-45-9/Year 2010
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 345.00

(See on page 31)

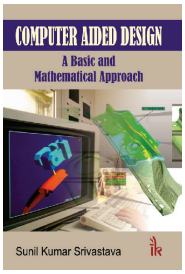


Computer Aided Design

Sunil Kumar Srivastava

ISBN: 978-93-81141-66-3/Year 2012
Size 18 cm × 24 cm/Pages 424
Paperback/₹ 505.00

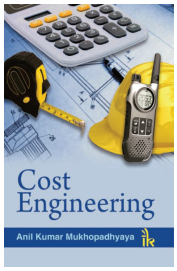
(See on page 7)



Cost Engineering

Anil Kumar Mukhopadhyaya

ISBN: 978-93-82332-99-2/Year 2014
Size 16 cm × 24 cm/Pages 128
Paperback/₹ 315.00



In the world of engineers and within the domain of Value Engineering, it is critical to have the knowledge of cost – How cost elements are built up in different industries, e.g., manufacturing, process industry, job shops, etc. The underlying belief is that only with pertinent knowledge can the engineers control and improve costs.

Cost is also a key focus area in certification programs such as the Certified Value Specialist (CVS) program on Value Engineering. Value Engineering practitioners and students find it difficult to assimilate the financial aspects required for qualifying the certification test.

Keeping all this in mind, this book builds on the concept of cost elements, chapter by chapter. Different methods of costing have been discussed in a separate chapter.

Each chapter supports the learning process through solved examples that clarify the concepts.

At the end of each chapter, objective type questions and problems are given. The solutions of all the objective questions and the problems have been provided in the last chapter.

The book is meant to be user-friendly and is focused on building an affinity for cost, through a simplified approach.

Contents:

Introduction/Elements of cost/Direct material cost/Direct labour cost/Direct expenses/Overhead/Methods of costing/Techniques/Cost model/Standard costing/Glossary/Bibliography/Index

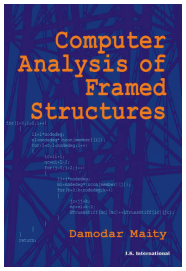
Audience – B. Tech, B.E. and Practising Engineers.

Computer Analysis of Framed Structures

Damodar Maity

ISBN: 978-81-89866-19-8/Year 2007
Size 18 cm × 24 cm/Pages 248
Paperback/₹ 475.00

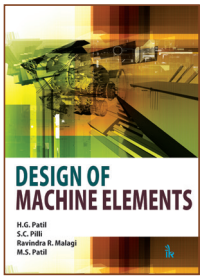
(See on page 8)



Design of Machine Elements

H.G. Patil • S.C. Pilli
Ravindra R. Malagi • M.S. Patil

ISBN: 978-93-84588-50-2/Year 2019
Size: 18 cm × 24 cm/Pages 1240
Paperback/₹ 995.00



Design of Machine Elements has been written as per the latest syllabus of different technical Universities. This will be a useful resource for the students of Mechanical Engineering to make them understand the concepts that go behind the designing of different machine elements. Each chapter contains a brief theory and a large number of solved examples. The chapters one to five deal with the basic principles of machine design. The topics of design philosophy, engineering materials, mechanics of materials and failure prediction methods are covered. The remaining book covers the design procedures for individual machine elements. The details of the forces acting, stresses induced, materials used and design procedures prescribed by the ISO, ISI AGMA standards are discussed. A large number of problems are solved in SI units using data from various sources. In all solved problems extensive reference is made to the data from our Machine Design Data Hand Book. This is indicated by the equation number, figure number, table number followed by MDHB. The probabilistic approach to design is introduced in the last chapter.

Contents:

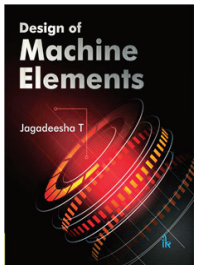
Introduction to Machine Design/Material Selection/Stress and Strain Analysis/ Design for Static Strength/ Design for Fatigue Strength/ Shafts/ Keys, Cotter and knuckle Joints/ Couplings/Power Screws/ Threaded Joints/ Riveted Joints/ Welded Joints/Cylinders and Cylinder Heads/Springs/ Spur Gears/ Helical Gears/Bevel Gears/ Worm Gears/ Clutches and Brakes/ Flexible Mechanical Elements (Drives)/Bearings and Lubrication/ Ball and Roller Bearings/ Design of I.C. Engine – Parts/ Flywheel/Probabilistic Approach to Design/ Index

Audience – BE & BTech students.

Design of Machine Elements Elements

Jagadeesha T

ISBN: 978-93-85909-81-8/Year 2017
Size 18 cm × 24 cm/Pages 1188
Paperback/₹ 945.00



The primary goal of *Design of Machine Elements* is to provide comprehensive design methods

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with various other important topics like stress concentration and its mitigation the concept of fatigue strength. In the later chapters of the book design of keys is presented along with cotter and knuckle joints riveted joints, boiler joints, lozenge joints and power screws design. The book discusses design concepts and the factor of safety. There are more than 750 solved examples along with unsolved problems for the students to practise. The wide coverage of the topics and a large number of solved examples will benefit students preparing for professional examinations.

Salient Features:

- General treatment of design principles and their applications.
- Comprehensive yet introductory approach to design of machine element from static, fatigue and impact strength point of view.
- Thorough discussion of the theory of stress concentration.
- Design of shafts with easy methods to analyze gear forces.
- Design of permanent and temporary joints, including consideration of the cases of eccentric loading.
- Power screws with many practical applications.

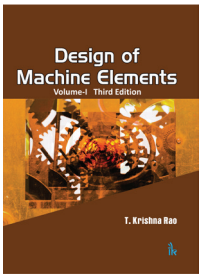
Contents:

Introduction to Machine Design/State of Stresses/Design for Static Strength/Eccentric Loading/Theories of Failure/Stress Concentration/Design for Fatigue Strength/Design for Impact Strength/Design of Shafts/Design of Keys and Splines/Design of Knuckle and Cotter Joints/Design of Couplings/Design of Welded Joints/Design of Riveted Joints/Threaded Fasteners/Power Screws

Audience – Undergraduate courses in mechanical, production, and industrial, automobile, aerospace, and automation.

Design of Machine Elements

(Volume-I) Third Edition



T. Krishna Rao

ISBN: 978-81-948676-6-1/Year 2020
Size: 18 × 24 cm/Pages 494
Paperback/₹ 475.00

Design of Machine Elements (Volume 1) is based on the syllabus for B.E./B. Tech courses. It is important for the designers to identify the types of loads, materials properties, safety requirements and failure modes for a particular situation. In addition to this, the book thoroughly illustrates the cases of various problems of design of machine elements. Variety of problems both with practical relevance and various examinations have been solved and presented in a simple and systematic way. This helps the students to understand and learn the subject with ease.

Salient Features:

- Concise and compact, covering all the major topics.
- Hints and notes wherever required for easy understanding.
- Simple language and explanations to facilitate easy understanding even by average students.
- Step-by-step approach in solving different types of problems

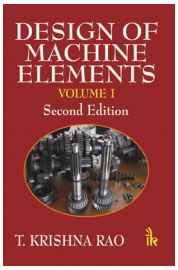
Contents:

Introduction/Theories of Failure/Stress Concentration/Fluctuating or Variable Loads/Impact Loading/Shafts/Keys and Couplings/Power Screws/Bolted Joints/Mechanical Joints/Riveted Joints/Welded Joints/Index

Audience – B.E./B. Tech.

Design of Machine Elements

(Volume I) Second Edition



T. Krishna Rao

ISBN: 978-93-81141-37-3/Year 2012
Size 16 cm × 24 cm/Pages 448
Paperback/₹ 435.00

Design of Machine Elements (Volume 1) is meant for B.E./B. Tech courses. This book thoroughly illustrates the cases of various problems of design of machine elements. Variety of problems both with practical relevance and various examinations are being solved and presented in a simple and systematic way. This helps the students to understand and learn the subject with ease.

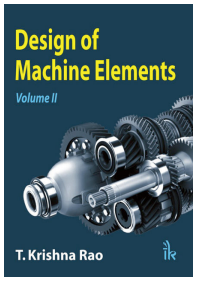
Contents:

Introduction/Theories of Failure/Stress Concentration/Fluctuating or Variable Loads/Impact Loading/Shafts/Keys and Couplings/Power Screws/Bolted Joints/Mechanical Joints/Riveted Joints/Welded Joints/Index.

Audience – B.E./B. Tech students.

Design of Machine Elements

Volume II



T. Krishna Rao

ISBN: 978-93-80026-63-3/Year 2010
Size 18 cm × 24 cm/Pages 664
Paperback/₹ 455.00

The book covers fundamental concepts, description, terminology, force analysis and methods of analysis and design of various machine elements like curved beams, springs, spur, helical, bevel and worm gears, clutches, brakes, belts, ropes, chains, ball bearings and journal bearings. The emphasis in treating the machine elements is on the methods and procedures that give the student enough competence in applying these methods and procedures to mechanical components in general. This book offers the students to learn to use the best available design knowledge together with empirical information, logical judgment, and often a degree of ingenuity in mechanical engineering design.

Salient Features:

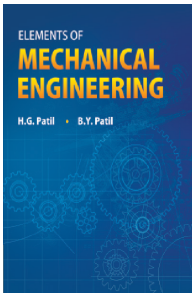
- Compatible with the Machine Design Data Books
- Step-by-step procedure for design of machine elements
- Large and variety of problems solved
- Thought provoking exercise problems
- The example design problems and solution techniques are spelled out in detail
- Thorough and in-depth treatment of design of the requisite machine elements
- Balance between analysis and design
- Emphasis on the materials, properties and analysis of the machine elements
- Selection of material and factor of safety are given for each machine element
- All the illustrations are done with the help of suitable diagrams
- As per Indian Standards.

Contents:

Curved Beams/Mechanical Springs/Cylinders and Cylinder Heads/Spur Gears/Helical Gears/Bevel Gears/Worm Gears/Belts, Ropes and Chains/Clutches/Brakes/Lubrication and Journal Bearings/Ball and Roller Bearings/Index.

Audience – B.E./B. Tech. students.

Elements of Mechanical Engineering



H.G. Patil • B.Y. Patil

ISBN: 978-93-84588-24-3/Year 2015
Size 18 cm × 24 cm/Pages 184
Paperback/₹ 345.00

Elements of Mechanical Engineering intro-duces the fundamentals of mechanical engineering to the first year students of all engineering branches. It covers the topics in Thermal Engineering, Manufacturing Engineering Automation and Material Science.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Spread in nine chapters the book deals with:

- Sources of energy, fuels and combustion
- Steam properties and boiler for steam generation
- Principles of operation of primemover
- Construction and operation of machine tools
- Automation and its applications to robotic & NC machines
- Properties of materials used in engineering
- Fabrication processes like welding, soldering and brazing
- Application of the principles thermodynamics to refrigeration and air conditioning

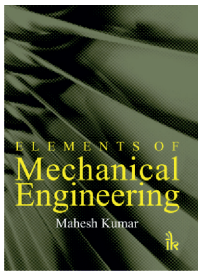
Simple line diagrams help to visualize the operations of machines. Solved examples are included to enhance understanding of the fundamentals.

Contents:

Energy Resources/Steam Formation and Steam Boilers/Turbines/ Internal Combustion Engines/Machine Tools/Automation and Applications/Engineering Materials/Metal Fabrication/Refrigeration and Conditioning/Index

Audience – B.E. & B.Tech. students.

Elements of Mechanical Engineering



Mahesh Kumar

ISBN: 978-93-82332-40-4/Year 2013
Size 18 cm × 24 cm/Pages 740
Paperback/₹ 595.00

This book is meant for the first year engineering students. It contains eight units in which the subject matter is presented systematically in a lucid language to make it easy to understand. About 300 examples are solved systematically in S.I. units without omitting any step. To enable the students to test their understanding of this subject more than 200 unsolved problems and about 250 multiple choice questions with answers have been given at the end of each unit. Steam tables are provided in the Appendix.

Broadly, the book deals with:

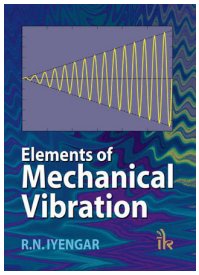
1. Properties of Steam and Boilers
2. Steam Turbines and Condensers
3. Internal Combustion Engines and Gas Turbines
4. Water Turbines, Pumps, and Hydraulic Devices
5. Simple Lifting Machines
6. Power Transmission Methods and Devices
7. Stresses and Strains
8. Shear Force and Bending Moment

Contents:

Preface/Properties of Steam and Boilers/Steam Turbines and Condensers/Internal Combustion Engines and Gas Turbines/Water Turbines, Pumps, and Hydraulic Devices/Simple Lifting Machines/ Power Transmission Methods and Devices/Stresses and Strains/ Shear Force and Bending Moment/Exercise/Appendix/Index.

Audience – Students for B.E. and B.Tech.

Elements of Mechanical Vibration



R.N. Iyengar

ISBN: 978-93-80578-56-9/Year 2010
Size 14 cm × 21 cm/Pages 288
Paperback/₹ 355.00

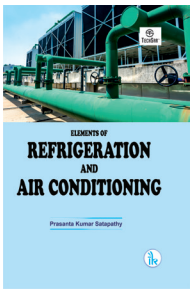
This is an entry level textbook to the subject of vibration of linear mechanical systems. All the topics prescribed by leading universities for study in undergraduate engineering courses are covered in the book in a graded manner. With minimum amount of mathematics, which is essential to understand the subject, theoretical aspects are described in each chapter. The theory is illustrated by several worked examples, which features will be found attractive by teachers and students alike. After a brief introduction to Fourier series in the first chapter, free and forced vibration of single degree-of-freedom systems with and without damping is developed in the next four chapters. Two degree-of-freedom systems included vibration absorbers are studied in chapter six. The seventh chapter generalises the previous results to multiple degree-of-freedom systems. Examples are wokred out in details to illustrate the orthogonality of mode shapes, the normal mode method and the method of matrix iteration. Analysis of continuous systems such as shafts, bars and beams is presented in chapter eight. Transformations to handle general time dependent boundary condition problems are described with examples. Torsional vibration of geared systems, shaft whirling and critical speeds are discussed in chapter nine. The numerical methods of Stodola and Holzer for finding critical speeds are described with examples. The tenth chapter is devoted to understand approximate methods for finding natural frequencies and mode shapes. Rayleigh's quotient, Dunkerley's approximation are described followed by Rayleigh-Ritz and Galerkin's methods. The book ends with a short appendix to indicate how elementary result derived in chapter four on support excitation of damped springmass systems are useful in measurement of vibration.

Contents:

Fourier Series/Free Vibration/Damped Vibration/Forced Vibration: Harmonic Excitation/Forced Vibration: General Excitation/Two Degree-of-Freedom Systems/Multiple Degree-of-Freedom Systems/ Vibration of Continuous Systems/Geared System, Whirling of Shafts, Critical Speed/Approximate Methods/Appendices/Bibliography/ Index.

Audience – Undergraduate Engineering students.

Elements of Refrigeration and Air Conditioning



Prof. Prasanta Kumar Satapathy

New

ISBN: 978-93-90620-98-2/Year 2023
Size 18 cm × 24 cm/Pages 356
Paperback/₹ 595.00

Elements of Refrigeration and Air Conditioning is specifically intended to provide the fundamentals of refrigeration and air conditioning derived from the first principle of thermodynamics, Heat and mass transfer and fluid mechanics. In other words this subject is an application part of the above principles. Keeping in view its wide industrial and domestic applications, this book emphasizes on physical understanding of the fundamental concepts of conventional and non-conventional refrigeration processes in a simple, yet concise manner. One chapter exclusively describes various aspects of power saving in refrigeration and air conditioning by adopting advanced techniques and new refrigerants for sustainability of refrigeration sector.

Salient Features:

- Each type of refrigeration process has been explained on the basis of the first principle i.e., the laws of thermodynamics and heat transfer.
- Special topic on 'Sustainability in Refrigeration and Air conditioning' in which energy saving methods are discussed.
- More than 100 practical problems and review and multiple-choice questions at the end of each chapter have been provided for better understanding of the concepts.
- Great value as a handbook for GATE aspirants and postgraduate students.

Contents:

Introduction/Refrigerants/Air Cycle Refrigeration/Vapour Compression Refrigeration System/Components of a Vapour Compression Refrigeration System/Vapour Absorption Refrigeration System/Thermoelectric and Other Refrigeration Systems/

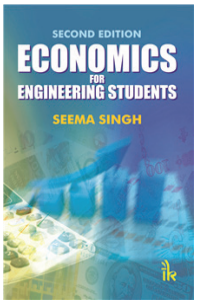
Psychrometry/Elementary Psychrometric Processes/Cooling Load Calculation/Human Comfort and Other Applications/Heating, Ventilating, and Air Conditioning (HVAC) Systems/Sustainability in Refrigeration and Air Conditioning/Appendices/Index

Audience: BSc (Hons) and BTech Courses.

Economics for Engineering Students

Second Edition

Seema Singh



ISBN: 978-93-84588-08-3/Year 2014
Size 16 cm × 24 cm/Pages 356
Paperback/₹ 475.00

This is a concise and reader-friendly introduction of Economics to engineering students who do not have prior knowledge of the subject. As engineers need to know economic tools to be able to apply them in their main field, i.e., engineering, the treatment of the book is very simple and takes care of syllabus which is being followed at the engineering programme of the various universities. Apart from introducing main branches of Economics, the book also discusses some advance topics such as forecasting, price determination under perfect competition and monopoly, decision making and linear programming. Subjects such as Operational Research and Accountancy have been discussed which are used in judging economic viability of engineering projects. However, most significant among all, is detailed introduction of Engineering Economics interesting and invigorating is the discussion on 'Elementary Engineering Economic Problems', which will help students to understand and relate application of Economics to engineering problems. Not only to engineering students, the book will also be helpful to students of science or medicine who want to appear for UPSC examination or pursue MBA programme.

Contents:

Part I: Introduction to Economics: Introduction

Part II: Topics of Economics: Microeconomics/Macroeconomics/Indian Economy/International Economics/Public Finance, Economic Development and Planning/Cost Concept and Cost Management

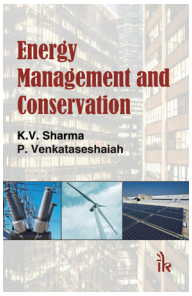
Part III: Topics of Applied Economics: Project Planning/Accountancy/Introduction to Engineering Economic Analysis/Further Analysis on Engineering Economics

Part IV: Interest Factors for Discrete Compounding

Audience – Engineering, Science, Medicine and MBA students.

Energy Management and Conservation

K.V. Sharma
P. Venkataseshaiah



ISBN: 978-93-81141-29-8/Year 2011
Size 18 cm × 24 cm/Pages 168
Paperback/₹ 425.00

Energy management and conservation is the area which requires general awareness among the people. The motto is "Energy conserved is energy produced". The subject of Energy management which was in the curriculum of the graduate courses has slowly drifted into undergraduate courses also. But unfortunately, there is no single textbook in this field catering to the needs of student community, energy managers/energy auditors and so on.

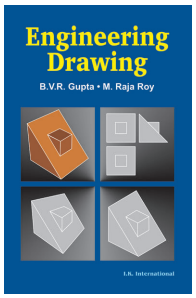
Contents:

Energy Management/Energy Surveying, Energy Auditing/Energy Conservation/Waste Heat Recovery/Methodologies for Improvement of Energy Efficiency/Electrical Energy Management/Index.

Audience – Electrical Engineering and Mechanical Engineering.

Engineering Drawing

B.V.R. Gupta • M. Raja Roy



ISBN: 978-81-906757-9-6/Year 2008
Size 18 cm × 24 cm/Pages 224
Paperback/₹ 195.00

Engineering Drawing is a common subject for all branches of engineering. The book presents step-by-step approach with important notes to remember at the end of each topic. Problems under various categories and university questions are also included in the exercises.

The book also covers one "straight lines" chapter which is not covered in any other book.

Contents:

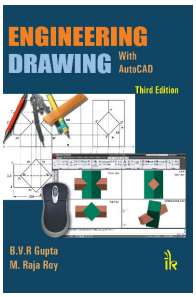
Introduction/Curves/Orthographic Projections/Projections of Points/Projections of Straight Lines/Projections of Planes/Projections using Auxiliary Planes/Projections of Solids/Projections of Sections of Solids/Development of Surfaces of Solids and Helices and Screw Threads/Intersections of Surfaces of Solids/Isometric Projections/Perspective Projections/Conversion of Isometric into Orthographic Projections

Audience – B.E & B. Tech. students.

Engineering Drawing *With Auto CAD*

Third Edition

B.V.R. Gupta • M. Raja Roy



ISBN: 978-93-84588-96-0/Year 2016
Size 18 cm × 24 cm/Pages 408
Paperback/₹ 475.00

Engineering drawing with AutoCAD is being thoroughly revised and brought up-to-date keeping the present day student's requirements and for creating interest to understand the concepts of the subject. This book helps both faculty and students to understand the concepts on their own and presents a step-by-step approach with important points to remember. Different types of worked examples and problems in the exercise are presented under separate categories so that the students can attempt any particular type of problem which they might want.

Salient Features:

- Chapter-wise short answer questions
- Chapter-wise pictures apart from figures have been added for easy understanding of the subject.
- Some figures in 3D have been added

Contents:

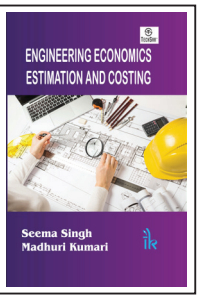
Introduction/Curves/Orthographic Projections/Projections of Points/ Projections of Straight Lines/Projections of Planes/Projections Using Auxiliary Planes/Projections of Solids/Projections of Sections of Solids/Development of Surfaces of Solids/Intersection of Surfaces of Solids/Isometric Projections/Perspective Projection/Conversion of Isometric into Orthographic Views/Computer Aided Drawing/Abbreviations, Symbols and Notations.

Audience – All students of B.E/B.Tech.

Engineering Economics, Estimation and Costing

New

Prof. Seema Singh
Prof. Madhuri Kumari



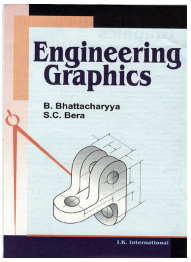
ISBN: 978-93-90620-08-1/Year 2022
Size: 18 cm × 24 cm/Pages 308
Paperback/₹ 425.00

(See on page 10)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Engineering Graphics



B. Bhattacharyya
S.C. Bera

ISBN: 978-81-907462-2-9/Year 2009
Size 18 cm × 24 cm/Pages 348
Paperback/₹ 425.00

The aim of the book is to provide a well-built foundation of engineering drawing to the beginners and to provide a scope to have a brushing up facility for the practising engineers. Keeping these two basic objectives in view, a step-by-step approach has been adopted—starting from drawing instruments, sheets, scales, curves, etc. The guidelines as laid in different codes published by Bureau of Indian Standards are mentioned and followed.

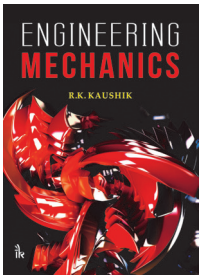
Involved association of the authors with the subject for a pretty long time in various capacities like teacher, examiner, paper-setter and head-examiner has enriched the book in terms of content and its approach of dealing. Sufficient number of worked out examples and multiple choice questions are provided to have a holistic view of the subject.

Contents:

Introduction/ISO and BIS Convention or Code/Drawing Instruments & Drawing Materials/Layout of Drawing Sheet/Geometrical Construction/Scales/Curves/Projections & Its Aspects/ Projection of Points/Projection of Straight Lines/Projection of Plane Surfaces/ Projection of Solids/Section of Solids/Development of Surfaces/ Intersection of Surfaces/Isometric Projection and View/Screw Threads, Nut-bolts, Rivets/Nomograms/Building Drawing/ Computer Aided Drawing/Index.

Audience – Undergraduate Engineering students.

Engineering Mechanics Statics and Dynamics



R.K. Kaushik

ISBN: 978-93-86768-29-2/Year 2019
Size: 18 × 24 cm/Pages 704
Paperback/₹ 745.00

This book has 24 chapters covering numerous problems (solved and unsolved). Problems are solved stepwise for better understanding. Some problems are solved by Vector method to make the book versatile and suitable for all universities. Wherever necessary, solutions are supported by illustrations to avoid any ambiguity. Style for presenting the matter is from easy to difficulty for clarity of subject. Chapters on overturning, skidding and load transfer of vehicles and cables using catenary curve have also been included.

One unique feature of this book is one chapter "Concurrent Forces in Space," mostly not available in other books.

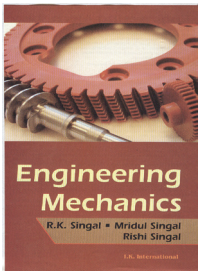
Contents:

Basics of Engineering Mechanics/Concurrent Forces in Space/ Coplanar, Collinear and Co-current Forces/Parallel Forces in a Plane, Moments and Couples/Friction/Lifting Machines/Centroid, Centre of Mass, Centre of Gravity/Moment of Inertia/Frameworks/ Shear Forces and Bending Moment Diagrams/Equilibrium of Strings and Cables/Virtual Work/Rectilinear Motion/Relative Velocity/Projectiles/D'Alembert's Principle/Dynamics of Rotation/ Momentum, Impulse, Work, Power and Energy/Centripetal Centrifugal Forces/Overturning and Skidding of Vehicles/Collision of Elastic Bodies/Simple Harmonic Motion/Simple and Compound Pendulums/Balancing/Index

Audience – BE & B.Tech Mechanical Engineering Students.

Engineering Mechanics

Revised and Updated



R.K. Singal • Mridul Singal
Rishi Singal

ISBN: 978-81-907462-1-2/Year 2012
Size 16 cm × 24 cm/Pages 494
Paperback/₹ 495.00

Engineering Mechanics systematically develops the concepts and principles essential for understanding the subject. The difficulties usually faced by engineering students have been taken care of while preparing the book. A large number of numerical problems selected from university, competitive examination papers and question banks, are properly graded, solved and arranged in various chapters.

The present book has been divided in five parts

- Two-Dimensional Force System
- Beams and Trusses
- Moment of Inertia
- Dynamics of Rigid Body
- Stress and Strain Analysis

The highlights of the book are:

- Comparison tables and illustrative drawings
- Exhaustive question bank on theory problems at the end of every chapter
- A large number of solved numerical examples
- SI units used throughout

Contents:

Unit I: Two-dimensional Force System/Force and Equilibrium/ Friction

Unit II: Beams and Trusses/Beams/Trusses

Unit III: Moment of Inertia/Centroid and Moment of Inertia/Mass Moment of Inertia

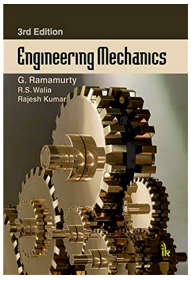
Unit IV: Dynamics of Rigid Body/Kinematics of Rigid Body/Kinetics of Rigid Body

Unit V: Stress and Strain Analysis/Simple and Compound Stresses and Strains/Bending and Torsion/Annexures/Index

Audience – B.E. & B.Tech.

Engineering Mechanics

Third Edition



G. Ramamurty
R.S. Walia
Rajesh Kumar

ISBN: 978-93-86768-09-4/ Year 2018
Size 18 cm × 24 cm/Pages 456
Paperback/₹ 545.00

Keeping in mind the curricula of various institutes, the text of this present edition has been thoroughly revised and several new problems with solutions have been added to make it more competitive and useful for the students. Solutions to typical problems from statics and dynamics provide the reader sufficient capability for solving the problems of mechanics.

This book focuses on the basic concepts of Engineering Mechanics and provides fundamental information required for understanding advanced subjects based on mechanics.

Salient Features:

- Importance of free-body diagrams for the analysis of problems explained.
- Three important methods for dynamic problems (i) Newton's second law of motion, (ii) Work-Energy method, and (iii) Impulse-Momentum method.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

- More than 150 sample problems with solutions have been provided explaining the applications of important principles.
- Fundamentals of mechanical vibrations explained with free-body diagrams.
- Multiple choice questions.

Contents:

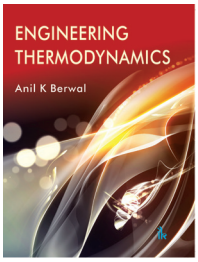
Part - I: Statics/Basic Concepts/Force Systems and Resultants/Equilibrium/Analysis of Trusses and Frames/Friction/Virtual Work/Centroids and Centres of Mass/Moments of Inertia

Part - II: Dynamics/Kinematics of Particles/Kinetics of Particles/Kinematics of Rigid Bodies/Kinetics of Rigid Bodies/Kinetics of Rigid Bodies/Work-Energy Method/Impulse and Momentum/Mechanical Vibrations/Appendices/References/Index

Audience – B.E. and B.Tech students.

Shelving – Mechanical Engineerings

Engineering Thermodynamics



Anil K Berwal

ISBN: 978-93-85909-86-3/Year 2018
Size 18 cm × 24 cm/Pages 438
Paperback/₹ 545.00

This book covers the essential theories of thermodynamics supported by a large number of solved examples to enhance the vision of the students towards application of thermodynamics in engineering practice. In this book, the author has addressed the subtleties of the subject matter where students feel uncomfortable. The book has evolved from class lecture notes prepared over the years, while teaching the subject and therefore presents the subject in a coherent and logical manner, covering all the nuances of the subject. The whole book is divided into nine chapters, which cover all the fundamental concepts of Zeroth, First and Second Laws of Thermodynamics, Thermodynamic relations, the concept of Availability, Exergy and vapour, Gas power cycles, and Thermodynamic potential.

Salient Features:

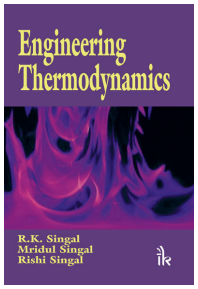
- SI units are used throughout the book.
- Emphasis is given on establishing a general understanding of energy transfer, mechanical work, systems, thermodynamic equilibrium and concept of reversibility and irreversibility.
- Takes a new approach towards discussing thermodynamic cycles.
- The second law of thermodynamics and its property, the "Entropy" is conceptually explained and applied to various systems.
- Adequate numbers of solved and worked problems are included.

Contents:

Basic Concepts of Thermodynamics/First Law of Thermodynamics/Second Law of Thermodynamics/Entropy/Properties of Pure Substance/Availability/Mixture of Ideal Gases/Thermodynamic Power Cycles/Thermodynamic Potential/

Audience – UG & PG students of mechanical engineering, aeronautical engineering, Chemical engineering, automobile engineering, researchers and energy professionals.

Engineering Thermodynamics



R.K. Singal
Mridul Singal
Rishi Singal

ISBN: 978-93-80026-51-0/Year 2009
Size 16 cm × 24 cm/Pages 493
Paperback/₹ 425.00

Engineering Thermodynamics has been designed for students of all branches of engineering specially undergraduate students of Mechanical Engineering. The book will also serve as reference manual for practising engineers. The book develops the concepts and principles essential for understanding the subject. The text has been supplemented with solved numerical problems, illustrations and question banks. Present book has been divided in five parts:

- Thermodynamic Laws and Relations
- Properties of Gases and Vapours
- Thermodynamics Cycles
- Heat Transfer and Heat Exchangers
- Annexures

Contents:

PART I—THERMODYNAMIC LAWS AND RELATIONS

Basic Concepts/The First Law and Its Applications/The Second Law of Thermodynamics/Entropy and Thermodynamic Relations

PART II—PROPERTIES OF GASES AND VAPOURS

Gases and Gas Mixtures/Properties of Steam/Refrigerants/Products of Combustion

PART III—THERMODYNAMIC CYCLES

Air Standard Cycles/Gas Turbine Cycles/Steam Power Cycles/Combined and other Vapour Power Cycles/Refrigeration Cycles

PART IV—HEAT TRANSFER AND HEAT EXCHANGERS

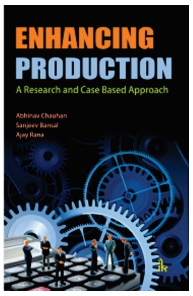
Introduction to Heat Transfer

PART V—ANNEXURES

Annexure I: Introduction to SI Units/Annexure II: Steam Tables in SI Units/Annexure III: Objective Type Questions

Audience – B.E. and B.Tech students.

Enhancing Production: A Research and Case Based Approach



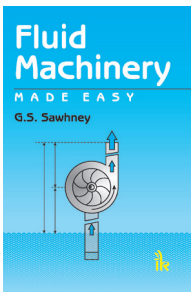
Abhinav Chauhan
Sanjeev Bansal • Ajay Rana

ISBN: 978-93-84588-33-5/Year 2015
Size 14 cm × 21.5 cm/Pages 138
Hardback/₹ 465.00

(See on page 271)

Fluid Machinery

Made Easy



G.S. Sawhney

ISBN: 978-93-81141-95-3/Year 2012
Size 16 cm × 24 cm/Pages 320
Paperback/₹ 385.00

The book presents the operating principles and working aspects of fluid machinery. First, it covers the laws and essential principles of fluid mechanics that form the basis on which fluid machinery operate. Subsequently, it covers the principles, constructional details and the methods of control of fluid machinery. Written in question-answer form, the book is precise and easy to understand. The coverage of fluid machinery includes impulse turbine, reaction turbine, centrifugal pump, reciprocating pump, rotary displacement pumps, air lift pump, jet pump, hydraulic accumulator, hydraulic intensifier, hydraulic crane, hydraulic lift, hydraulic press, fluid coupling, hydraulic ram and torque converter.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Salient Features:

- Provides succinct coverage of all operating aspects of fluid machinery
- Includes a large number of worked problems at the end of each chapter to help students achieve a sound understanding of the subject matter
- Gives objective type questions with explanatory answers to assist students in preparing for competitive examinations

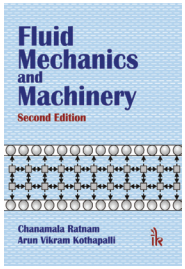
Contents:

Impact of Jet/Hydraulic Turbines/Impulse Turbines/Reaction Turbines/Similarity Relations and Performance Characteristics/ Governing of Turbines/Centrifugal Pumps/Reciprocating Pumps/ Rotary Positive Displacement Pumps/Hydraulic Devices and Systems/Index

Audience – UG and PG Mechanical Engineering.

Fluid Mechanics and Machinery

Second Edition



Chanamala Ratnam
Kothapalli Arun Vikram

ISBN: 978-93-81141-41-0/ Year 2012
Size 18 cm × 24 cm/ Pages 682
Paperback/₹ 575.00

Fluid mechanics and machinery has an important role in the disciplines of Mechanical and Civil Engineering, in particular, its role in Civil Engineering activities like construction of reservoirs, domestic pipeline network, etc. Its involvement in Electrical Engineering aspects like power generation and electrical equipment design, etc. also cannot be overlooked.

With the help of a large number of pictorial explanations this book is designed to raise the standard of the reader, step by step in understanding the concepts of fluid mechanics and its applications in hydraulic machinery. The contents are developed in transition from basics of simple chapters to complexity of the remaining chapters including the fundamental formulae for deriving equations, keeping the con-nectivity between chapters and their applications.

Important formulae including their units, constant values to be remembered, are being given in a tabular format at the end of each chapter to facilitate quick reference.

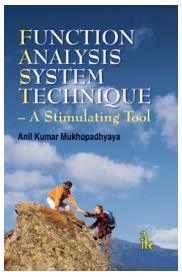
Contents:

A brief history/Fluids and their properties/Pressure and pressure measuring devices/Hydrostatic forces and buoyancy/Fluid flow kinematics/Fluid dynamics/Viscous flow/Boundary layer equations/Dimensional analysis and model similitude/Compressible flow/Introduction and impact of jets/Hydraulic turbines/Hydraulic pumps/Laboratory experiments/Answers to objective questions/ Index

Audience – Undergraduate Civil, Mechanical and Electrical engineering students.

Function Analysis System Technique

A Stimulating Tool



Anil Kumar Mukhopadhyaya

ISBN: 978-93-81141-88-5/Year 2012
Size 16 cm × 24 cm/Pages 120
Hardback/₹ 415.00

The book is about a framework called Function Analysis System Technique (FAST) which is embedded in the Value Engineering methodology. Value Engineering (VE) is a methodology that helps companies to rationalize costs. This book on FAST is intended to increase the capabilities of VE practitioners and students. It is a step-by-step self-learning tool to one of the most critical aspects of Value Engineering.

Salient Features:

- Concept of Function Analysis System Technique: This will provide practitioners and students a lucid self-learning tool that will enable them to approach cost rationalization programs or process improvement assignments with deeper conceptual knowledge.
- Enabling tool for a wider cross-section of readers: The book focuses on a wide range of applications of the technique. It is also intended for students/practitioners of Value Engineering as this is the key obstacle in implementation of this technique, as there is paucity of books on this topic.
- Academic resource for certification programs: The book is aligned to the needs of students/practitioners who seek knowledge in order to pursue Value Engineering Certifications.

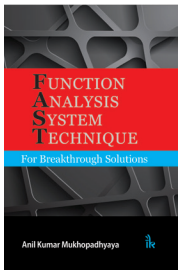
Contents:

Recapitulation of Value Engineering Concept/Fundamentals of Function Analysis System Technique (FAST)/Basic(Classic) FAST Diagram/Technically Oriented FAST/Customer Oriented FAST/ Function Cost Allocation/Answers/Glossary/Bibliography/Index

Audience – For Students/Practitioners of production and value engineering.

Function Analysis System Technique

For Breakthrough Solutions



Anil Kumar Mukhopadhyaya

ISBN: 978-93-86768-01-8/Year 2017
Size 16 cm × 24 cm/Pages 160
Paperback/₹ 365.00

An introduction has been made on Value and Mismatches, comparatively a new concept, which clarifies the meaning of Value. The nucleolus of FAST is the correct definition of Function. This has been explained in detail through day-to-day examples. Case studies have taken a special place in this book.

Salient Features:

- Correct definition of Function which is the key for breakthrough solutions.
- Concept of different types of FAST Diagram through day-to-day examples.
- Academic resource for certification programme as well as on the Value Engineering subject.

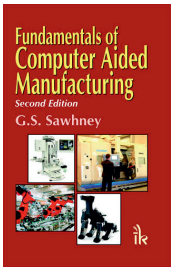
Contents:

Recapitulation of Value Engineering Concept/Function Analysis/ Fundamentals of Function Analysis System Technique (FAST)/ Basic(Classic) FAST Diagram/Technically Oriented FAST/Customer Oriented FAST/Function Cost Allocation/Case Studies/Solutions / Glossary/Bibliography/Index.

Audience – Students of Engineering/ Computer Science, and researchers.

Fundamentals of Computer Aided Manufacturing

Second Edition



G.S. Sawhney

ISBN: 978-93-80578-84-2/Year 2011
Size 14 cm × 21.5 cm/Pages 400
Paperback/₹ 425.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Written with the fourth-year engineering students of undergraduate level in mind, this well set out textbook explains the fundamentals of Computer Aided Manufacturing (CAM) written in question-answer form, the book is precise and easy to understand.

Computer aided manufacturing and robotics play a vital role in implementing automation in the industry. It is, therefore, essential for engineering students to have sound knowledge of the basics of CAM and robotics. This book has been designed to provide the essential and fundamental understanding of NC machines, NC part programming, system devices, computer integrated manufacturing system and robotics.

Contents:

Automation and NC systems/Number Systems/Logic and Arithmetic Circuits/Electronic Devices and Computer/Features of NC Machine/NC Coordinate and Motion Control Systems/ DNC, CNC and Adaptive Control/NC Part Programming/System Devices/ Computer Integrated Manufacturing System/Robotics/Syllabus of CAM (UPTU)T/Test Papers/Biblography/Index

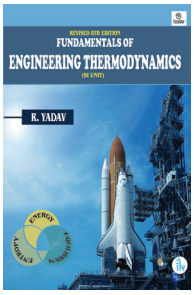
Audience – Undergraduate students of Mech. Engineering.

Fundamentals of Engineering Thermodynamics

New

Revised 8th Edition

R Yadav • Sanjay • Rajay



ISBN: 978-93-90620-87-6/2023
Size 18 cm × 24 cm/Pages 1096
Paperback/₹ 895.00

Thermodynamics deals with energy interactions between material bodies. It is the science of 3E's, namely, Energy, Entropy and Equilibrium. The applications of its laws and principles are found in all fields of energy technology, notably, in steam, gas and nuclear power plants, internal combustion engines, gas turbines, jet propulsion, refrigeration, air conditioning, compressors, gas dynamics, and direct energy conversion.

Starting with the basic concept, the book discusses the important topics such as basic concepts, heat and work energy, ideal and real gases, zeroth, first and second laws of thermodynamics, entropy and third law, available energy and exergy, gas power cycles, vapour power cycles, general thermodynamic relations, refrigeration cycles, psychrometry, non-reactive mixtures, reactive mixture, chemical equilibrium, direct energy conversion, compressible flows, and heat transfer.

The book is an essential text for BE/ B.Tech for Mechanical Engineering students, UPSC and GATE examinations.

Salient Features:

- A large number of real-life solved problems in each chapter with diagrams.
- Emphasis on physical explanation of equations
- Includes unsolved problems, things to think about, short and long theoretical questions, numerical questions, software based questions, design and open-ended questions and multiple answer type questions.
- Provides brief designs of thermal systems.

Contents:

Introduction: Basic Concepts, Definitions and Applications/Work and Heat—Energy Interaction/Temperature and Zeroth Law of Thermodynamics/Behaviour of Ideal (Perfect) and Real Gases/First Law of Thermodynamics in General and for Non-flow Processes/ First Law of Thermodynamics for Flow Process/Second Law of Thermodynamics/Entropy and Third Law of Thermodynamics/ Properties of Pure Substance (Steam) and Applications/General Thermodynamic Relations/Availability (Exergy) and Irreversibility/ Non-reactive Gas Mixtures/Gas Power Cycles/Vapour Power Cycles/Refrigeration Cycles/Psychrometry/Reactive Mixture (Fuels and Combustion)/Chemical and Phase Equilibrium/Direct Energy Conversion/Compressible Fluid Flow/Heat Transfer/Appendix/ References/Index

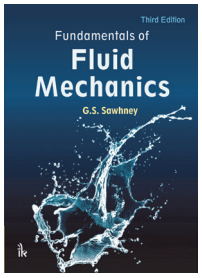
Audience: B.E & B.Tech students.

Shelving: Mechanical Engineering

Fundamentals of Fluid Mechanics

Third Edition

G.S. Sawhney



ISBN: 978-93-86768-30-8/Year 2020
Size: 18 × 24 cm/Pages 968
Paperback/₹ 895.00

Written for the second-year engineering students of undergraduate level, this well set out textbook explains the fundamentals of Fluid Mechanics. Written in question-answer form, the book is precise and easy to understand.

The book presents an exhaustive coverage of the theory, definitions, formulae and examples which are well supported by diagrams (wherever necessary) and problems in order to make the underlying principles more comprehensive.

In the present third edition, the book has been thoroughly revised and enlarged. Modification to every chapter has been carried out on the basis of new developments in this area. Additional typical problems based on the examination papers of various technical universities have been included with solutions for easy understanding by the students.

Objective questions of competitive examinations of GATE, IES and IAS have also been included with solutions and explanations at the end of each chapter.

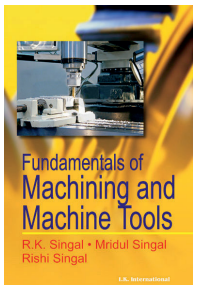
Contents:

Fluids: Definitions & Properties/Pressure and Head/Hydrostatic Forces/Buoyancy and Floatation/Fluid Masses Subjected to Acceleration/Dimensional Analysis/Similitude and Model Analysis/ Fluid Kinematics/Fluid Dynamics-I/Fluid Dynamics-II/Laminar Flow/Turbulent Flow/Boundary Layer Analysis/Flow Through Pipes and Compressibility Effects/Ideal Fluid Flow/Flow Past Submerged Bodies/Question Papers/Index

Audience – Second year engineering students.

Fundamentals of Machining and Machine Tools

R.K. Singal • Mridul Singal
Rishi Singal



ISBN: 978-81-89866-66-2/Year 2008
Size 16 cm × 24 cm/Pages 384
Paperback/₹ 445.00

Fundamentals of Machining and Machine Tools deals with analytical modeling of machining processes, modern cutting tools materials and how these affect the economics of machining. The book emphasizes underlying concepts, analytical methods and economic considerations. The book thoroughly illustrates the causes of various phenomena and their effects on machining practice. It includes descriptions of modern analytical methods outlining the merits and the demerits of various modeling approaches.

Spread in 22 chapters, the book is broadly divided in four sections:

1. Machining Processes
2. Cutting Tools
3. Machine Tools
4. Automation

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

This book presents a detailed coverage of machine tool applications, vibrations, automation and computer aided manufacturing data on cutting parameters for machining operations and main characteristics of machine tools has been separately provided in Annexures. In addition to exhaustive theory, a number of solved numerical examples have been included in various chapters. Question banks on sample theory questions have been given at the end of each chapter. The book is a must for anyone involved in metal cutting, machining, machine tool technology, machining applications, and manufacturing processes.

Contents:

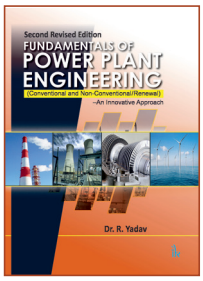
Machining Processes/Mechanics of Metal Cutting/Heat Generation in Metal Cutting/Cutting Fluids/Surface Quality and Surface Finish/Chip Control/Grinding Process/Economics of Metal Cutting Operations/Cost Estimation of Machined Components/ Nonconventional Machining Process/Design for Machining/ Nomenclature and Geometry of Cutting Tools/Tool Materials/Wear and Life of Cutting Tools/The Grinding Wheel/Design Principles of Cutting Tools/Design Principles of Machine Tools/Machine Tool Vibrations/Numerically Controlled Machine Tools/Automation in Manufacturing Systems/Computer Aided Manufacturing/NC/CNC Part Programming/Annexure-I/Annexure-II/Index.

Audience – B.E. & B.Tech.

Fundamentals of Power Plant Engineering

(Conventional and Non-conventional) –An Innovative Approach

Second Edition



Dr. R. Yadav • Sanjay • Rajay

ISBN: 978-93-90620-90-6/Year 2022
Size: 18 × 24 cm/Pages 920
Paperback/₹ 995.00

The purpose of the book is to present a thorough treatment of conventional and non-conventional power plants from working, design and application and point of view.

It provides a brief idea of energy scenario and various terminologies used in energy technology. It makes you understand the working principle, control aspects, operation and maintenance and design aspect of power plants. The aim is to develop creativity and engineering judgement among students. It focuses on economics of power plant and recent developments in the methods of power generation. Recent developments and prospects for solar and magneto-hydrodynamics power generation are also discussed.

This book covers the syllabus of the subject Power Plant Engineering. The book is also suitable for all competitive examinations like Civil Services, Engineering Services and PSUs of central and state governments.

Salient Features:

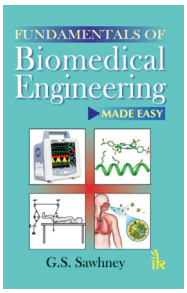
- A large number of typical and real-life solved problems in each chapter with diagrams.
- An exhaustive treatment of theory and design aspects with diagrams especially in conventional part.
- Simple and lucid language.
- Exercise portion (unsolved part) which includes many innovative features like Things to Think About, Short and Long Theoretical Questions, Software Based Questions, Design and Open Ended Questions and Multiple-Choice Questions.
- Summary of formulae has been given at the end of each chapter.
- Non-conventional part has been enlarged.

Contents:

Introduction – Energy and its Various Aspects/Variable Load Problem and Power Plant Economics/Steam power plant cycles/ Fuels and Combustion in Steam Power Plant/Combustion Equipment and Fuel Handling Systems for Steam Power Plant/Steam Generators, Ash Handling Systems and Feed Water Treatment/Steam Turbines/ Auxiliary Systems, Construction, Operation and Maintenance of Steam Turbines/Condensers and cooling Towers/ Power Plant/ Hydroelectric Power Plant/Diesel Engine Power plants/Turbines Power Plant/Combined, Co-generation and Mixed Cycle Power Plants/Energy Storage/Major Electrical Equipment in Power Plants/Air Pollution Caused by Power Generation and its Control/ Non-conventional/Renewable Energy Resources Power Plants/ References/Appendices/Index

Audience – BE & B.Tech students.

Fundamentals of Biomedical Engineering Made Easy



G.S. Sawhney

ISBN: 978-93-81141-48-9/Year 2012
Size 16 cm × 24 cm/Pages 320
Paperback/₹ 355.00

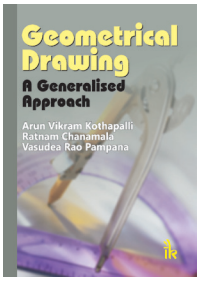
This book deals with the principles and concepts of Biomedical Engineering in a simple and easy manner. The text is admirably suited to meet the needs of the students of mechanical engineering who opt for the elective Biomedical Engineering. However, coverage of bioinstrumentation, biomaterials and computing for biomedical engineering also meets the needs of electronics and instrumentation engineering students.

Contents:

Anatomical Terms, Planes and Moments/Histology/Physiological Systems/Transducers and Biomedical Instrumentation System/ Bioelectrical Potentials and Electrodes/Cardiovascular System and Measurement/Respiratory System/Diagnostic Techniques/ Biotelemetry/Patient Care and Monitoring/Computer in Medicine and Digital Image/Signal Processing/Biomechanics of Bones/ Biomechanics of Soft Tissues/Skeletal Joints/Mechanics of the Spinal Column/Mechanics of the Upper Limbs/Mechanics of the Lower Limbs/Metallic Biomaterials/Polymeric Biomaterials/Bioceramic Biomaterials/Composite Biomaterials/Kidney and Blood Flow/ Index.

Audience – Mechanical Engineering, Elective Biomedical Engineering, Electronics and instrumentation Engineering Students.

Geometrical Drawing A Generalised Approach



Arun Vikram Kotaphalli
Ratnam Chanamala
Vasudeva Rao Pampana

ISBN: 978-93-82332-02-2/Year 2012
Size 18 cm × 24 cm/Pages 312
Paperback/₹ 405.00

This book undertakes "step by step understanding of the projection concepts of 2-D and 3-dimensional objects, with diagrammatical explanations," objects, with diagramatical explanations. The contents are developed in transition from basics of simple constructions of plane figures to complexity of the remaining chapters (3-dimensional objects) including the generalized approaches without compromising the connectivity through the chapters.

A large number of diagrams for easy understanding of the changes and assumptions taken in projecting the object on to a plain paper are also provided.

Each chapter contains sufficient number of solved problems, questions and objective type questions.

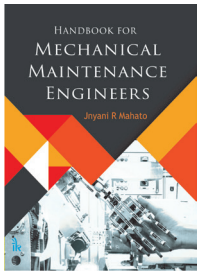
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Contents:

Instruments, Geometrical Constructions and Scales/Curves/ Orthographic Projections and Projection of Points/Projection of Straight Lines/Projection of Planes/Projection of Solids/Sections of Solids/Development of Surfaces/Isometric Projections/Perspective Projections/Objective Questions

Audience – Civil, Electrical and Mechanical Engineering. students.

Handbook for Mechanical Maintenance Engineers



Jnyani R Mahato

ISBN: 978-93-85909-58-0/Year 2019
Size: 18 × 24 cm/Pages 888
Paperback/₹ 795.00

Maintenance Engineering is the discipline and profession of applying engineering concepts for the optimization of equipment, procedures, and departmental budgets to achieve better maintainability, reliability, and availability of equipment.

Mechanical maintenance engineering is increasing in importance due to rising number of equipment, systems, machineries and infrastructure. Maintenance is to ensure a unit is fit for purpose, with maximum availability at minimum costs.

The personnel for maintenance should possess significant knowledge of statistics, probability and logistics, and additionally in the fundamentals of the operation of the equipment and machinery.

The book broadly deals with:

- Optimization of the maintenance organization structure
- Analysis of repetitive equipment failures
- Estimation of maintenance costs and evaluation of alternatives
- Forecasting of spare parts
- Assessing the needs for equipment replacements and establish replacement programs
- Application of scheduling and project management principles to replacement programs
- Assessing required maintenance tools and skills required for efficient maintenance of equipment
- Assessing required skills for maintenance personnel
- Reviewing personnel transfers to and from maintenance organizations
- Assessing and reporting safety hazards associated with maintenance of equipment

This book provides extensive data, figures, standards and detailed information related to maintenance. Sufficient information and overview enabling the maintenance engineers to take an informed and confident decision is also provided.

Each chapter and topic dealt with in this book has been provided with a brief and crisp overview and synthesis of pertinent information.

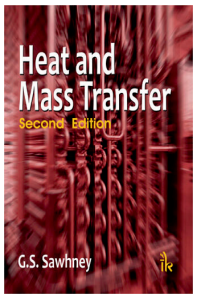
Contents:

Units, Dimensions & Standards/Limits, Fit, Tolerance and Surface Finish/Screw Thread and Threaded Fasteners/Engineering Materials/Structural Steel Sections, Plates and Pipes/Machine Elements/Couplings and Power Transmission Mechanisms/ Lifting and Handling Tools, Tackles and Equipment/Gears, Gear Trains and Gearboxes/Bearings/Lubrication and Lubricants/ Welding and Welding Materials/Hydraulic Power Systems/Basic Electrical Engineering/Maintenance Organisation and Management/ Appendix/Index

Audience – BE & BTech students.

Heat and Mass Transfer

Second Edition



G.S. Sawhney

ISBN: 978-93-80578-39-2/Year 2010
Size 18 cm × 24 cm/Pages 489
Paperback/₹ 505.00

Written with the third-year engineering students of undergraduate level in mind, this well set out textbook explains the fundamentals of Heat and Mass Transfer. Written in question-answer form, the book is precise and easy to understand.

The book presents an exhaustive coverage of the theory, definitions, formulae and examples which are well supported by plenty of diagrams and problems in order to make the underlying principles more comprehensive.

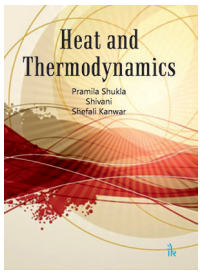
The chapter on steady state one-dimensional heat conduction has been modified to include problems on two-dimensional heat conduction. Finite heat difference method of solving such problems has been covered. Modification has also been included in the text as per the suggestions obtained from various sources. Additional typical problems based on the examination papers of various technical universities have been included with solutions for easy understanding by the students.

Contents:

Introduction to Heat Transfer/General Heat Conduction Equation/ Steady State Heat Conduction/Heat Transfer from Extended Surfaces/ Transient Heat Conduction/Forced Convection Heat Transfer/ Free Convection/Radiation Heat Transfer/Heat Exchangers/ Condensation and Boiling/Mass Transfer/Index.

Audience – Undergraduate Engineering students.

Heat and Thermodynamics



Pramila Shukla
Shivani
Shefali Kanwar

ISBN: 978-93-86768-78-0/Year 2020
Size: 18 × 24 cm/Pages 340
Paperback/₹ 345.00

This book is designed for B.Sc., B.E. and A.M.I.E. students of all disciplines. It lays priority to the basic concepts of the topic with developing a profound conceptual base of heat and thermodynamics.

This book is a bridge between thermal physics and non-equilibrium physics. It contains both the basic theory and principles as well as topics like fundamental concepts of kinetic theory and transport phenomena, heat and thermodynamics, ideal gases, real gases, laws of thermodynamics and heat engines, entropy, black body radiation and laws of emission and absorption of radiation, thermodynamic relations and various phenomena of day-to-day life.

Salient Features:

- Covers syllabus of almost all universities.
- All concepts of heat and thermodynamics are supported with relevant diagrams for better and easy understanding.
- A large number of solved examples.
- Includes short, and long answer questions and numerical problems at the end of each chapter.

Contents:

Study of Ideal Gases and Thermodynamic Concept/Study of Real Gases and Properties of Pure Substances/Transport Phenomenon in Gases and Conduction of Heat/Basic Laws of Radiation/Concept of

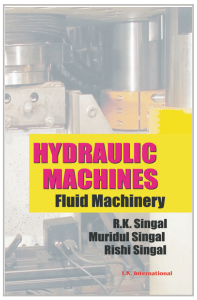
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Heat, Zeroth and First Laws of Thermodynamics/Second and Third Law of Thermodynamics and Entropy/Thermodynamic Relations and Potentials/Change of State in Matter/Transportation of Heats/ Index

Audience – B.Sc., B.E. and A.M.I.E graduate students.

Hydraulic Machines Fluid Machinery



R.K. Singal • Mridul Singal
Rishi Singal

ISBN: 978-93-80026-01-5/Year 2009
Size 16 cm × 24 cm/Pages 324
Paperback/₹ 405.00

Hydraulic Machines: Fluid Machinery has been designed as a textbook for engineering students specializing in mechanical, civil, electrical, hydraulics, chemical and power engineering. The highlights of the book are simple language supported by analytical and graphical illustrations. A large number of theory questions and numerical problems with solution hints have been annexed at the end of every chapter. A large number of objective questions have been included to help the students opting for competitive examinations. Five case studies based on research have been included which can be advantageously used by practising engineers pursuing research design and consultancy careers. Complete design of hydraulic machines has been demonstrated with the help of suitable examples.

The book has been divided into six parts containing 13 chapters.

- Fundamentals of Fluid Flow
- Turbines
- Pumps
- Systems and Power Plants
- Case Studies
- Objective Questions.

Contents:

Part I–Fundamentals: Classification and Applications/Basic Principles of Hydraulic Flow and Jet Theory

Part II–Turbines: Pelton Turbine/Francis Turbine/Propeller and Kaplan Turbines/Draft Tube and Cavitation/Governing of Hydraulic Turbines/Dynamic Similarity and Performance Characteristics

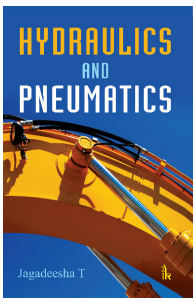
Part III–Pumps: Centrifugal Pumps/Reciprocating Pump/Special Pumps

Part IV–System and Plants: Hydraulic Systems/Hydraulic Power Plants

Part V–Case Studies/Part VI–Objective Questions/Index.

Audience – Students of Mechanical, Civil, Electrical, Hydraulics, Chemical and Power Engineering.

Hydraulics and Pneumatics



Jagadeesha T

ISBN: 978-93-84588-90-8/Year 2015
Size 18 cm × 24 cm/Pages 432
Paperback/₹ 545.00

This book presents a comprehensive treatment of the principles of hydraulics and pneumatics.

The main objective of this book is to give a clear understanding of the concepts underlying hydraulics and pneumatics. Question papers of the last 12 years of VTU have been solved and a liberal number of numerical examples are given which include examination questions from various universities. Some of the problems of routine nature have been included to familiarize the readers with the numerical manipulations and orders of magnitude of various parameters that occur in the subject of hydraulics and pneumatics.

This book is useful for students and engineers in mechanical, production, automobile, and mechatronics engineering who wish to understand hydraulics and pneumatics technology and apply it in solving the engineering problems and is primarily designed for the use of graduate and postgraduate students, as well as students who are preparing for AMIE.

Salient Features:

- Presentation of basic theory in simple and readily understandable form.
- A balanced presentation of hydraulics and pneumatics
- Large number of solved problems from university question papers
- Unsolved problems and review questions are given at the end of each chapter, focusing examination questions.
- Each chapter has a concise and comprehensive treatment of topics with strong emphasis on fundamental concepts. A number of theoretical questions and unsolved exercises have been given for practice so as to widen the horizon of comprehension of the topic.

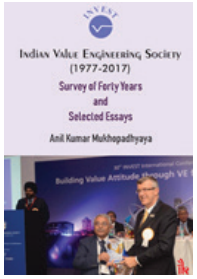
Contents:

Introduction to Hydraulic Power/The source of Hydraulic Power: Pumps/Hydraulic Actuators/Hydraulic Motors/Control Components in Hydraulic Systems/Hydraulic Circuit Design and Analysis/Maintenance of Hydraulic System/Introduction to Pneumatic Control/Pneumatic Actuators/Pneumatic Control Valves/ Design of Pneumatic Circuits/Design of Multi Cylinder Circuits/ Electro Pneumatic Controls/Preparation and Distribution of Air

Audience – Computer programmers and Mechanical engineering students.

Indian Value Engineering Society (1977-2017)

Survey of Forty Years and Selected Essays



Anil Kumar Mukhopadhyaya

ISBN: 978-93-86768-17-9/Year 2019
Size 18 cm x 24 cm/Pages 286
Paperback/₹ 425.00

Indian Value Engineering Society (INVEST) completed its forty years (1977 to 2017) and will embark on forty-first year during the Conference in Mumbai, in December 2018. This book surveyes the evolution and successful journey of the Society with many ups and downs. It also includes concepts, techniques of value methodology, essays on conference themes and applications of value methodology in industry.

Salient Features:

- The rich history and story of the progressive development of INVEST.
- Have carefully curated interesting information for historical record keeping and deeper learning for value engineering (VE) practitioners and other interested readers.
- The life profiles of L.D. Miles and Charles W. Bytheway.
- Monumental work of L. Kannappan, his life has also been profiled here to acknowledge his enormous contribution to the VE movement in India.
- Some key concepts and techniques, relevant for both VE practitioners, as well as for readers who wish to explore this technique.
- Industrial applications indicate how Value Engineering initiative is for the benefit of the customers.
- Top Management Presentation, an important aspect of any initiative, has also been dealt with

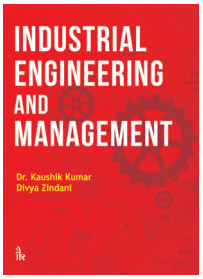
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Contents:

Value Engineering Movement in India/ The Doyens of Value Analysis/ Value Engineering/Value Methodology/Concepts and Techniques/ Conference Themes/Industry Applications/Animated PPT/PPT for Top Management Presentation/Frequent Asked Questions (FAQ)/ SAVE International® Value Methodology Glossary/References/ Bibliography/Appendix

Audience – All UG students of engineering, architecture and computer science; M. Tech/M. Arch courses on CAD; practicing design engineers.

Industrial Engineering and Management



Dr. Kaushik Kumar
Divya Zindani

ISBN: 978-93-86768-50-6/Year 2019
Size: 18 cm × 24 cm/Pages 520
Paperback/₹ 495.00

Industrial engineering deals with the optimization of different processes, systems or organizations. It involves the use of different physical, mathematical and social principles together with the methods of engineering design to optimize the results obtained from the different complex processes or systems.

The scope of industrial engineering management is as vast as to include a wide array of sub-specialties such as operations research, manufacturing engineering, production engineering, management science, etc.

This book explains the different aspects related to the principles of optimizing the complex systems and processes of an organization.

Divided into fifteen sections, broadly it deals with:

- the subject of industrial engineering and management and its prospects
- productivity and the ways to increase it by the discussion on work study
- method study and work measurement through time study
- entrepreneurial development, theories on entrepreneurship and the different government policies for small scale industries
- aspects of inspection and statistical quality control, total quality management, role of inspection and the statistical quality control
- production planning and control
- objectives and importance of plant location as well as its layout
- different methods for job evaluation and aspects of wages, industrial legislations
- important aspects of the value analysis and its different stages
- role of a leader, the domains of leadership,
- methods of optimization and project management
- industrial safety
- engineering economics, concepts and principles of replacement and maintenance analysis and inventory control and its models.

Contents:

Section I: Introduction to Industrial Engineering–Introduction

Section II: Productivity and Work Study–Productivity/Work Study/ Human Factor and Work Study

Section III: Method Study–Method Study/Movement at Workplace/ Methods and Movements at the Workplace/Evaluate, Define, Install,Maintain/Method Study in the Office

Section IV: Work Measurement–Time Study/Time Study: Selecting and Timing the Job/Time Study: Rating/Time Study: From Study to Standard Time/Predetermined Time Standards/The Use of Time Standards

Section V: Entrepreneurial Development–Entrepreneur and Entrepreneurship/Qualities and Functions of Entrepreneurs, Role of Entrepreneur in Economic Growth/Competing Theories of Entrepreneurship/Government Policy Towards Small Scale Industries' Structure

Section VI: Inspection and Statistical Quality Control–Defining Quality/Total Quality Management/The Role of Inspection/ Statistical Quality Control

Section VII: Production Planning and Control–Production, Planning and Control

Section VIII: Location Selection and Plant Layout–Plant Location/ Location Decision and Layout

Section IX: Job Evaluation and Wages–Introduction to Job Evaluation/Job Evaluation Method/Wages

Section X: Industrial Legislation–Industrial Legislation

Section XI: Value Analysis–What is Value Analysis?/How to use Value Analysis?

Section XII: Leadership–Leadership

Section XIII: Operation Research–Linear Programming/Project Management

Section XIV: Industrial Safety–Introduction to Safety Engineering/ Occupational Safety

Section XV: Engineering Economics–Introduction/Replacement and Maintenance Analysis/Inventory Control/Review Questions/Index

Audience – Undergraduate in various engineering disciplined, Postgraduate in industrial engineering and water resource management

Industerial Management

S.B. Srivastava

ISBN: 978-93-81141-92-2/Year ....
Size 18 cm × 24 cm/Pages .....
Paperback/₹ 545.00



(See on page 284)

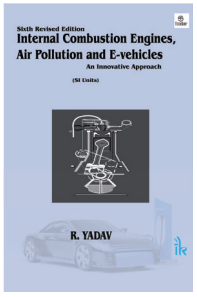
Internal Combustion Engines and Air Pollution & E-Vehicles

An innovative Approach

R Yadav • Sanjay • Rajay

New

ISBN: 978-93-90620-73-9/Year 2023
Size 18 × 24 cm/Pages 956
Paperback/₹ 995.00



Internal combustion engines have contributed at a large scale in the development of transportation, power generation and energy. The industries that develop and manufacture internal combustion engines, and support their use play a dominant role on country's economy.

The new edition includes the coverage of electric vehicles along with engine theory, cycle analysis, all auxiliaries' systems, modern developments, measurements, testing and performance, air pollution, modeling and design of major parts of internal combustion engines with a large number of typical solved problems.

The depth, richness, emphasis on fundamentals, creativity, innovative approach and judge-ment enhancement capabilities are the strength of the book.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Internal combustion engines form a core course and backbone for the students of Mechanical and Aeronautical Engineering. This book will serve as textbook for undergraduate and postgraduate students.

Salient Features:

- Exclusive chapter on Electric Vehicles
- A large number of typical and real-life solved problems in each chapter with diagrammatic approach
- Emphasis on physical and fundamentals explanation of equations involved has been given
- Exercises (unsolved problems) include Things to Think About, Short and Long Theoretical questions, Numerical Questions. Software-based questions, Design and open-ended question and multiple Answer type questions
- Useful for candidateof Engineering and Civil Services Examinations conducted by UPSC

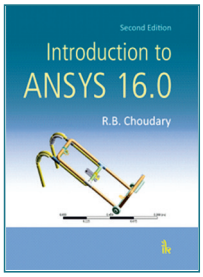
Contents:

Introduction and Thermo chemistry/Air Standard Cycles/Fuel-Air and Actual Cycles/Combustion in SI engines/Combustion in CI Engines/Fuels for IC engines/Carburetion and Electronic Gasoline Injection/Mechanical and Electronic CI Fuel Injection Systems/ Ignition and Starting Systems/Engine Friction and Lubrication/ Engine Heat Transfer and Cooling Systems/Intake and Exhaust Systems and Valve Train/Supercharging and Turbo charging/Two-stroke Engines/Measurements Testing and Performance/IC Engines and Alternatives under Development/Modelling of IC Engine/Gas Turbines and Jet Propulsion/Air Pollution and Control/Design of IC Engine Parts/Compressors/Electric Vehicles/INDEX

Audience: B.E/B.Tech, I.E.S, I.A.S and I.F.S Examinations.

Introduction to ANSYS 16.0

Second Edition



R B Choudhary

ISBN: 978-93-85909-10-8/Year 2016
Size 18 cm × 24 cm/Pages 332
Paperback/₹ 895.00

ANSYS is a large and complex program with many different capabilities. This book is intended to help the new ANSYS user in getting started. The four chapters in this book introduce the reader to effective finite element problem solving by demonstrating the use of the comprehensive ANSYS FEM software in a series of step-by-step tutorials. The contents include ANSYS Basics, ANSYS Operations, Modeling and Meshing and Structural Analysis. This revised edition provides its reader with up-to-date information on ANSYS software.

Salient Features:

- The first chapter on ANSYS Basics deals with the finite elements method, mechanical APDL environment, running the ANSYS program, GUI, graphical picking, customizing the GUI, using the ANSYS session and command logs.
- The second chapter on ANSYS Operations deals with getting started, loading, solution, post processing, general postprocessor, time-history postprocessor, selecting the components, creating graphs, annotation, animation, documenting the analysis, typical modeling difficulties, and the mechanical toolbar.
- An exclusive treatise on modeling and meshing is given in the third chapter, Modeling and Meshing, which includes model generation, planning the approach, coordinate systems, working planes, solid modeling, importing solid models, generating the mesh, revising the model, direct generation, and number control and element reordering.
- Problems on linear static structural analysis are presented in Chapter 4, Structural Analysis, in which the problems are categorized based on their dimensionality. The 2D problems are grouped into trusses, beams, planes and frames. The 3D problems are dealt under the headings solids and space.

Contents:

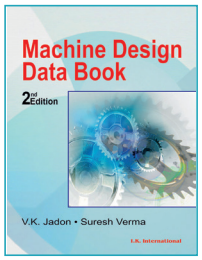
1. ANSYS Basics
2. ANSYS Operations
3. Modeling and Meshing
4. Static Structural Analysis

Audience – UG and PG students of civil engineering and mechanical engineering, building/construction professionals dealing with FEM

Shelving – Civil Engineering/Mechanical Engineering

Machine Design Data Book

Second Edition



V. K. Jadon
Suresh Verma

ISBN: 978-81-89866-12-9/Year 2007
Size 18 cm × 24 cm/Pages 368
Paperback/₹ 445.00

The present book is a self-contained data book for the graduate level students of Mechanical, Production and Industrial Engineering. The data and formulae in the book are presented in an easy-to-locate-and-use style.

Salient Features:

- Compact in size
- Easy to refer and locate data
- Follows the SI System of Units throughout
- Uses standard symbols throughout
- As per Indian Standards (IS)
- Design formulae and the corresponding figures appear on the same page
- Includes design data related to human factors
- Includes design data for statistical and reliability
- Enriched design data on journal bearings and Antifriction bearings
- Includes figures and proportions of various types of joints like sleeve and cotter, gib and cotter, foundation bolt etc.
- New chapter on Levers
- Figures for applications for power screws like screw jack, machine vice, gate valve, turn-buckle, etc.

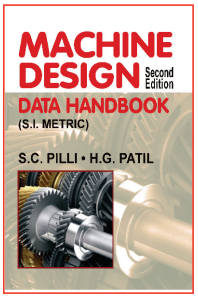
Contents:

Basic Design Data/Stresses in Machine Elements/Stress Concentration and Fatigue/Shafts/Keys, Splines and Couplings/Cotter and Knuckle Joints/Riveted Joints/Welded Joints/Screws and Fasteners/Flat Belts and Pulleys/V-Belts and Pulleys/Chains/Ropes/Springs/Clutches/ Brakes/Journal Bearings/Antifriction Bearings/Gears/Flywheel/ Gaskets and Packings/Pressure Vessels and Pipes/I.C. Engine Parts/ Curved Beams/Rotating Rings, Discs and Cylinders/Statistical Formulae and Data/Ergonomic Design Data/Levers/Appendices/ Index.

Audience – Mechanical Engineering students.

Machine Design Data Handbook

Second Edition



S.C. Pilli
H.G. Patil

ISBN: 978-93-84588-03-8/Year 2015
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 435.00

Machine Design Data Handbook is meant for Mechanical, Production and Industrial Engineering branches. The book contains data in the form of equations, tables and graphs. The first chapter deals with the basic equations derived in mechanics of materials and helps in determining stresses in machine elements under various loading situations. The second chapter contains data of mechanical properties of various engineering materials used

for the machine elements. The third chapter deals with the various theories used for predicting failures under the static and fluctuating loads. It also deals with the methods used for estimating the life to failure under variable loadings. The chapter on fits and tolerances is intended to help in specifying the manufacturing tolerances. These chapters are useful in solving any general design problems. The remaining chapters are dedicated to individual machine elements. The standard procedures adopted for each machine is presented in individual chapters. A new chapter "Vibrations" has also been added in this edition. The standards prescribed by ISI (BIS)< ISO and AGMA Standards organisations are included.

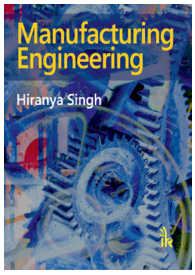
The S.I. system of units has been adopted through the book. A short list of conversion factors for important quantities is given in the beginning. A complete list of conversion factors for the various physical quantities is given in the Appendix at the end of the book. These are useful in solving problems in Metric units also. Thus, the book is useful for both the systems of units.

Contents:

Stress Analysis/Properties of Materials/Failure-Prediction/Design of Shafts/Keys, Pins and Cotters/Couplings, Clutches and Brakes/ Riveted Joints/Welded Joints/Threaded Joints and Power Screws/ Springs/ Thin Cylinders and Cylinder Heads/Thick Cylinders and Rotating-Disks/Fits and Tolerances/Journal Bearings/Antifriction Bearings/Worm-Gears/Belt Drives/Rope Drives/Hoisting and Power Chain/I.C. Engine Parts/CAMS/Curved Members/ Packing and Seals/Appendices/Appendix A – Preferred Numbers/Appendix B – Metric to SI Conversion Factors/Bibliography/Index

Audience – Students, Teachers and Practicing Engineers for solving and preparation of working design projects.

Manufacturing Engineering



K. Hiraniya Singh

ISBN: 978-93-82332-48-0/Year 2014
Size 18 cm × 24 cm/Pages 608
Paperback/₹ 525.00

This book is designed to provide basic technical knowledge about tools, gadgets, instruments and other devices used during the manufacture of workpieces by machining. It also deals with the machining operations and their physical principles. It includes the manufacture of workpieces on the machine, with the measuring and testing of these parts with necessary calculations involved.

The book is intended for those who are directly occupied with machine tools, but particularly for those connected with the metal trade, who are, however, not supposed to know all details about the machining operations, but they should have working knowledge about machine tools, cutting tools, their design and performance.

Moreover the students entering polytechnics in mechanical engineering branch, whose field of activity predominantly comprises machine tools and appliances, must be well acquainted with the ways of manufacture.

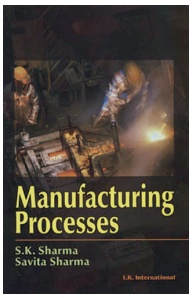
More than 1000 line diagrams is the most important feature of this book.

Contents:

Dimensional Metrology and Measurement/Measuring Tools/Semi-Precision Measuring Tools/Precision Measuring Tools/Marketing Tools/Cutting Tools/Drilling/Drilling Machines/Hand Tools/Screw Threads/Fasteners/Bolts, Nuts Studs and Machine Screws/Circlips/ Rivets and Riveted Joints/Cylindrical and Taper Pins/Mechanical Power Transmission/Shaft Couplings/Clutches/Limits, Fits and Tolerances/Bearings/Lubrication and Lubricants/Gauges/Index

Audience – B.E. & B. Tech Students of Mechanical, Production and Tool Engineering.

Manufacturing Processes



S.K. Sharma
Savita Sharma

ISBN: 978-81-89866-49-5/Year 2007
Size 16 cm × 24 cm/Pages 724
Paperback/₹ 645.00

Manufacturing Processes is meant for the students of B.Tech. in all branches. It deals with fundamental concepts of materials & metallurgy, foundry, metal working, welding techniques, pattern making & carpentry, industrial safety, metal cutting & machine tools, non-conventional machining techniques and quality control. The book is presented in a simple style, with summary at a glance at the end of each chapter before review questions and can be best used by students of all levels. A large number of diagrams have been included for illustrating the subject matter. It is an ideal introductory textbook on Manufacturing Processes.

Salient Features:

- The book covers all topics related with workshop technology or manufacturing processes.
- Line diagrams have used to explain the fundamentals and working of machines.
- One chapter has been devoted to Non-Conventional Machining Techniques.
- Problems from various examinations and university papers have been used in review questions.
- Quality control forms part of the book.

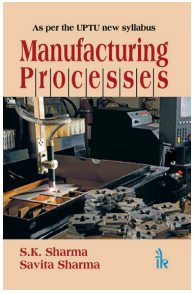
Contents:

Introduction/Plant and Shop Layout/Foundary and Casting/ Mechanical Working of Metals/Materials and Heat Treatment/ Industrial Safety/Powder Metallurgy/Plastics and their Processing/ Simthying and Forging/Bench Working and Fitting/Fastners and Plumbing/Welding and Allied Processes/Sheet Metal Working Cleaning, Finishing and Coating of Metal Surfaces/Wood Working/ Introduction to Machine Tools/Non-Conventional Manufacturing Methods/Quality Control/Index.

Audience – B.E. and B.Tech students.

Manufacturing Processes

As per the UPTU new Syllabus



S.K. Sharma
Savita Sharma

ISBN: 978-93-80578-74-3/Year 2011
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 455.00

Manufacturing Processes is meant for the students of B.Tech. in all branches of engineering.

In all there are nine chapters in this book with review questions in the end of each chapter along with objective type questions with answers. This has been done since in the university paper the 1st question consisting of 10 parts is compulsory.

In order to make the book more useful the text has been kept simple and concise, the main stress is providing conceptual understanding of various topics of the book.

Salient Features:

1. Objective questions of various examining bodies from part of
2. Problems from various examinations and university papers have been used in review questions.
3. Line diagrams have been used to explain the fundamentals and working of machines.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Contents:

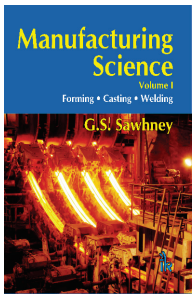
Unit-I: Basic Metals And Alloys: Properties and Applications/1. Properties of Materials/2. Ferrous Materials and Non-Ferrous Metals And Alloys/Unit-Ii: Introduction of Metal Forming, Casting Process And Its Applications/3. Basic Metal Forming Processes/4. Casting And Its Applications/Unit-Iii: Introduction Of Machining & Welding And Its Applications/ 5. Introduction To Machining/6. Welding/Unit-Iv: Miscellaneous Topics/7. Manufacturing/8. Non-Metallic Materials/9. Miscellaneous Processes/Bibliography/Question Paper/Index.

Audience – B.E. and B.Tech. students.

Manufacturing Science

Volume I

G.S. Sawhney



ISBN: 978-93-82332-53-4/Year 2015
Size 18 cm × 24 cm/Pages 464
Paperback/₹ 425.00

Written for the second year engineering students of undergraduate level course, this well set out textbook on Manufacturing Science explains the fundamentals of fabrication processes such as foundry, forming, welding and related conventional and non-conventional processes. It is written in question-answer format, making it precise and easy to understand. The descriptions are also supported with simple illustrations and solved numerical examples. The book has extensive coverage of theory, derivation of formulae and solved questions from past examinations.

Contents:

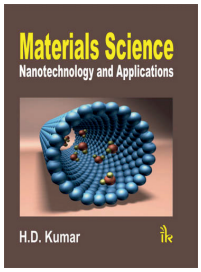
Manufacturing/Metal forming processes/Forging/Drawing and extrusion processes/Rolling/sheet metal working/Unconventional metal forming/Powder metallurgy/Jigs and fixtures/Manufacturing of plastic components/Casting,/Welding/Superfinishing/Index.

Audience – B.E. and B.Tech students.

Materials Science

Nanotechnology and Applications

H.D. Kumar



ISBN: 978-93-81141-17-5/Year 2011
Size 18 cm × 24 cm/Pages 292
Hardback/₹ 1195.00

Prompted by the substantial impact of nanoscience and nanotechnology on the diverse materials, metals and minerals being used by over six billion people on the disturbingly overcrowding, increasingly mobile and energy guzzling planet, the author has attempted to produce a readable and comprehensive outline of the physics, chemistry, biology and engineering dimensions and processes relating to the exploitation of various kinds of materials, nanomaterials and nanoparticles, with special reference to carbon-based and silicon-based materials. The study introduces the reader to novel, superfunctional and composite materials, metamaterials, electronics, electrets, carbon nanotubes, nanowires, molecular transistors, and graphene currently attracting research focus.

Besides its overall utility for all scientists and engineers, the monograph would serve as a supplementary textbook for advanced courses in several areas of engineering, physics, chemistry, nanotechnology, pharmaceutical biotechnology and biomedicine in traditional universities, engineering colleges, institutes of technology and medical colleges. It is supported by the most up-to-date literature citations, of direct interest to researchers on materials science and nanotechnology.

Contents:

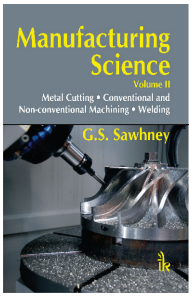
General Introduction / Useful Novel Materials / Nanomaterials and Nanoparticles / Carbon Nanotubes and Nanostructures / Some Techniques for Nanoscience and Materials Science / Silica-based Materials, Electronics, Electrets and Transistors / Super-Functional Materials and Metamaterials / Composite Materials / Nanotechnology: Some Chemical Dimensions / References / Index

Audience – Scientists and Engineers, supplementary textbook for Engineering, Physics, Chemistry, Nanotechnology, Pharmaceutical Biotechnology and Biomedicine.

Manufacturing Science

Volume II

G.S. Sawhney



ISBN: 978-93-82332-72-5/Year 2015
Size 16 cm × 24 cm/Pages 304
Paperback/₹ 345.00

Written for the third year engineering students of undergraduate level, this well set out textbook on Manufacturing Science explains the fundamentals of meal cutting, machine tools, machining processes, welding, conventional and non-conventional processes, non-conventional machining and limits, fits and tolerances. The book has been written in question-answer format, making it precise and easy to understand. The descriptions are also supported with simple illustrations and solved numerical examples. The book has extensive coverage of theory, derivation of formulae and solved questions from past examinations.

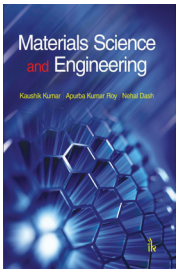
Contents:

Metal cutting/Lathe and automation/Shaper, slotter & planner/Milling/Drilling, boring and reaming/Grinding/Superfinishing/Welding & non-conventional welding/Non-conventional machining/Limits, fits and tolerance/Index

Audience – B.E. and B.Tech students.

Materials Science and Engineering

Kaushik Kumar • Apurba Kumar Roy
Nehal Dash



ISBN: 978-93-85909-64-1/Year 2017
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 495.00

Spread in five sections having thirteen Chapters, the primary aim of the book is to provide basic information on engineering materials from the engineering point of view.

Starting with kinetics, thermodynamics and crystallographic aspects of engineering materials highlighting atomic structure, bonding and themodynamics in solids including structure of crystalline solids. The second section deals with properties and strengthening of engineering materials. The third section deals with the degradation and failure of engineering materials including corrosion, fatigue and creep. Properties and processing of engineering materials, i.e., polymers, glasses and ceramics; processing and forming of operations of engineering materials are discussed in the fourth section. The last section deals with the economic, environmental and social aspects related to the use of engineering materials. The book concludes with model question papers, a detailed glossary and index of the text.

Salient Features:

- Updated discussion on metals, ceramics, composites and polymer.
- Properties and processing of engineering materials.
- Non-metallic engineering materials, e.g., polymers, ceramics and glasses.
- Model question papers and multiple-choice questions along with solutions.

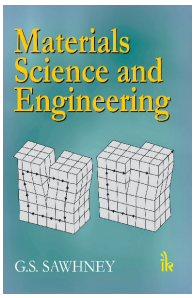
Contents:

Section I: Kinetics, Thermodynamics & Crystallographic Aspects of Engineering Materials
Section II: Properties & Strengthening of Engineering Materials
Section III: Degradation & Failure of Engineering Materials
Section IV: Engineering Materials: Properties and Processing
Section V: Economic, Environmental & Social Aspects of Engineering Materials

Audience – UG students of Mechanical Engineering.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Materials Science and Engineering



G S Sawhney

ISBN: 978-93-82332-62-6/Year 2014
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 485.00

The book presents the structural or constitutional details of different materials which lead to differences in their behavior and their properties such as physical, mechanical, chemical, electrical, thermal and magnetic. The text includes atomic models and bondings, crystallography and imperfections, mechanical properties and testing, phase diagrams and equilibrium diagrams, ferrous and non-ferrous materials, heat treatments, magnetic properties, electric properties, ceramics, plastics, optical and thermal materials including concrete and composite materials, fracture and fatigue, corrosion and its control. Written in question-answer format the book is precise and easy to understand.

Salient Features:

- Provides succinct coverage of the subject of Materials Science.
- Written in question-answer format with relevant questions asked in various universities, there by helping students to understand the underlying concepts quickly and to the point.
- Includes a large number of worked problems to help the students to understand the subject matter.

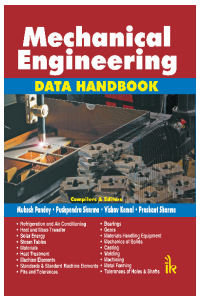
Contents:

Introduction to materials/Atomic models and chemical bonding/Crystallography/Miller indices and X-ray crystallography techniques/Crystal imperfections/Mechanical properties/Mechanical testing/Microstructural examination/Phase diagram and equilibrium diagram/ Ferrous metals/Heat treatment/Non-ferrous metals and alloys/Magnetic properties/Electric properties/Ceramics/Plastics/Other Materials/Performance of materials in service

Audience – BE and B.Tech students.

Mechanical Engineering Data Handbook

Compilers & Editors



Mukesh Pandey • Pushpendra Sharma
Vishav Kamal • Prashant Sharma

ISBN: 978-93-82332-18-3/Year 2015
Size 18 cm × 24 cm/Pages 1136
Paperback/₹ 545.00

Mechanical Engineering - Data Handbook is meant for the students of B.E./B.Tech, and for the candidates preparing for IES, GATE and other competitive examination and research. It consists of 18 chapters in all, covering the various topics systematically.

Salient Features:

- The presentation of the subject matter is very systematic and the language and data of the text is direct and easy to understand.
- Each chapter is saturated with much needed text supported by reference and explanatory diagrams to make the subject matter self-explanatory.
- A large number of design data of machine, thermal and steam tables properly graded, have been added in various chapters to enable the students to attempt different types of machine data in the examinations.
- Includes design data related to human factors and design data for statistical reliability.
- Includes figures and proportions of various types of materials, machine components, engines, thermal and steam tables.
- Figures for applications for power screws, machine parts, thermal science, and solar energy.
- S.I. units are consistently used throughout the book.
- Comprehensive presentation of contents in the beginning for quick reference.
- Detailed chapters on thermodynamics, heat and mass transfer, refrigeration and air-conditioning and solar energy.

Contents:

Part I: Thermal science

Refrigeration and air conditioning/Heat and mass transfer/Solar energy/Steam tables

Part II: Materials and heat treatment

Materials/Heat treatment

Part III: Machine design

Machine elements/Standards and standard machine elements/Fits and tolerances/Bearings/Gears/Materials handling equipment

Part IV: Mechanics of solids

Mechanics of solids

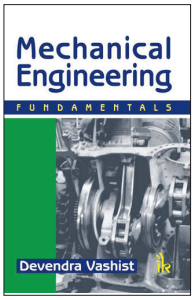
Part V: Manufacturing processes

Casting/Welding/Machining/Metal forming/Tolerances of holes and shafts

Appendix/Index.

Audience – Students of B.E/B.Tech. and for the candidates preparing for ES/Gate and other competitive examination and research.

Mechanical Engineering Fundamentals



Devendra Vashist

ISBN: 978-93-80578-20-0/ Year 2010
Size 18 cm × 24 cm/Pages 448
Paperback/₹ 475.00

This book provides fundamentals of Mechanical Engineering for the undergraduate students of all branches of engineering.

The various topics discussed in the book are:

Machine tool and fabrication process/Thermodynamics, IC engines and steam turbines/Hydraulic turbines and pumps/Refrigeration and air-conditioning/Power transmission methods and devices/Stresses, strain, shear force and bending moment diagrams/Numerical control machines. (NC and CNCs)/Applied mechanics.

A large number of worked out problems, exercises and MCQs are provided in all the chapters.

Contents:

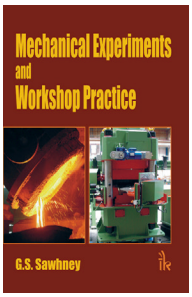
Unit I: Introduction to Commonly Used Machine Tools in a Workshop/Unit II: Basic Concepts of Thermodynamics/Unit III: Properties of Steam and Steam Generators (Boilers)/Unit IV: Refrigeration and Air-Conditioning/Unit V: Hydraulic Turbines and Pumps/Unit VI: Power Transmission Methods and Devices/Unit VII: Stress and Strain/Unit VIII: Introduction to Manufacturing System/Unit IX: Shear Force and Bending Moment Diagram/Unit X: Fabrication Process/Unit XI: Applied Mechanics/Unit XII: Steam Turbines, Condensers, Cooling Towers, I.C. Engines and Gas Turbine/Exercise/Steam Tables/Motlier Diagram/Index.

Audience – B.E. and B.Tech. students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Mechanical Experiments and Workshop Practice



G. S. Sawhney

ISBN: 978-93-80026-75-6/Year 2009
Size 18 cm × 24 cm/Pages 384
Paperback/₹ 425.00

The book is meant for first year BE/B.Tech. students and addresses the course curriculum in Mechanical Experiments and Workshop Practice. The book explains theory and methodology of performing experiments about:

- Mechanics/Strength of Materials/Materials Science
- The book also includes:
- IC Engines/Steam Engines/Boilers/Steam Turbines/Water Turbines and Pumps
- Manufacturing processes and workshop experiments are included in workshop practice which cover:
- Machining/Welding/Metal forming

Salient Features:

- It provides a large number of diagrams for easy understanding of tools and equipment.
- A large number of viva and objective type questions are also given.

The concepts and principles of working of various common mechanical machinery such as bicycle, motorcycle, lift, escalator, hovercraft, aircraft, helicopter, jet engine and rocket have been explained. Similarly, the constructional details and principles of working of commonly used household appliances such as desert cooler, air conditioner, refrigerator, washing machine, ceiling fan, tubelight and iron box have been included.

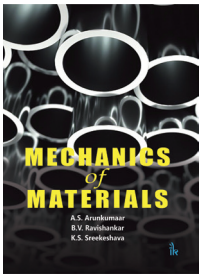
Audience – B.E. and B.Tech. students.

Mechanics of Materials

A.S. Arun Kumar
B.V. Ravishankar
K.S. Sreekeshva

ISBN: 978-93-86768-75-9/Year 2020
Size: 18 × 24 cm/Pages 424
Paperback/₹ 515.00

New



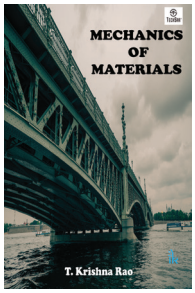
(See on page 16)

Mechanics of Materials

Dr. T. Krishna Rao

ISBN: 978-93-90620-55-5/Year 2023
Size 18 cm × 24 cm/Pages 774
Paperback/₹ 995.00

New



The Mechanics of Materials is a discipline of mechanical engineering that studies deformable solids using numerical models. The resistance of an element is defined as its ability to resist efforts and forces applied without breaking, permanent deformation or acquiring deterioration. For mechanical design elements with complex geometries, the strength of materials is often insufficient and needs to use techniques based on the theory of elasticity or the mechanics of deformable solids. These problems in terms of stresses and strains can then be solved by using numerical methods such as finite element analysis.

This book thoroughly illustrates the cases of various problems of mechanics of materials. This book has 10 chapters covering Simple Stresses, Elastic Constants, Strain Energy and Impact loading, Shear Force and Bending Moments, Bending and Shear Stresses, Principal Stresses and Strains, Deflection of Beams, Torsion of Shafts, Columns and Cylinders and Spherical Shells.

Variety of problems both with practical relevance and various examinations are solved and presented in a simple and systematic way. This helps the students to understand and learn the subject with ease. Exercise problems and MCQs are added at the end of each chapter.This book is meant for engineering students.

Salient Features:

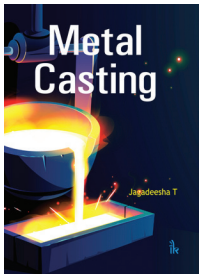
- Concepts of stress and strains
- Step-by-step procedure for solving problems
- Large number of solved problems
- Thought provoking exercise problems
- Problems and solution techniques spelled out in detail
- Balance between analysis and calculations
- Emphasis on the materials, properties and analysis
- All the illustrations are done with the help of suitable diagrams.

Content:

Simple Stresses and Strains/Deflection of Beams/Elastic Constants and Poisson's ratio/Torsion of Shafts/Strain Energy and Impact Loading/Columns and Struts/Shear Forces and Bending Moments/ Thin and Thick Cylinders and Spherical Shells/Bending and Shear Stress in Beams/Index/Principal Stresses and Strains

Audience: B.E/ B.Tech, AMIE Students.

Metal Casting Theory and Practice



Jagadeesha T

ISBN: 978-93-86768-67-4/Year 2019
Size: 18 × 24 cm/Pages 776
Paperback/₹ 725.00

Casting is one of the most commonly used manufacturing processes in industries. It is almost impossible to make a product like automobile, aircraft, etc., without cast component. This book is meant to serve as a bridge between the study of the processes and their applications in production industries.

Compared with the classical method of writing a book, two similar fundamental processes, namely, theory and practice are blended and explained so that the reader gets holistic approach to casting. First basic processes are discussed, followed by the special processes and design of systems is discussed. It is a comprehensive source of technical metal casting information that foundry engineers and managers, process engineers, and anyone, who has interest in or needs to know about foundry operations and products. The book comes as a useful resource for Mechanical Engineering students. It also includes industry data, foundry practices, real-time industrial applications, and problems.

Salient Features:

- Up-to-date technical information and Modern trends in the area are covered.
- Mathematical treatment of casting concepts like Riser design, gating design, solidification and cooling are discussed
- GATE and IES exam questions for the competitive exams are included.

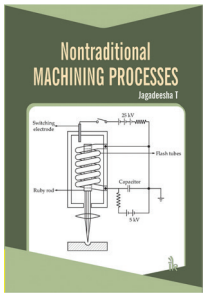
Contents:

Introduction to Casting Processes/Technology of Pattern Making/ Moulding Materials and Sand Preparations/Testing Sand Properties/ Types of Sand Moulds/Cores and Core Making/Gating Design/ Risers and Its Design/Cooling and Solidification of Castings/Melting Practices/Casting Defects/Shakeout and Cleaning of Castings/

Inspection and Repair of Castings/Heat Treatment of Castings/ Casting Design Considerations/Foundary Modernisation and Mechanisation/Centrifugal Casting/Die Casting Processes/Shell Mould Casting/Investment Casting Process (ICP) and ceramic shell ICP/Ferrous and Non-ferrous Foundry Practice/Miscellaneous Special Casting Processess/CAD and Numerical Simulations in Casting Processes/Index

Audience – B.E. & B.Tech students.

Non-Traditional Machining Processes



Jagadeesha T

ISBN: 978-93-85909-12-2/Year 2016
Size 18 cm × 24 cm/Pages 272
Paperback/₹ 505.00

Today, non-traditional machining processes no longer remain as laboratory processes and already in use in most of modern manufacturing industries. On account of the importance of these production methods in modern manufacturing systems, non-traditional machining processes are now included in curriculum of the most graduate and undergraduate engineering courses. Yet, there are a textbooks covering fundamentals, mathematical concepts and numerical problems.

The main objective of this book is to give a clear understanding of the concepts underlying modern machining process. Each non-traditional machining process is explained in a simple way covering process, equipment, process parameters, process capabilities, advantages, applications and limitations. The parameters kept in mind while writing the book are coverage of contents to suit syllabi of various Indian universities, prerequisite knowledge of the user of this book, lucidity of writing, clarity of thoughts and variety of solved and unsolved numerical problems, including problems from competitive examinations. Question papers of several years of many universities have been solved to give a flavor of questions that appear in the examinations.

This book presents a comprehensive treatment of the processes and equipment of non-traditional machining processes, spread in 8 chapters. Each chapter is divided into subtopics and is explained in an easy manner. All the chapters contain review questions and exercise problems.

Salient Features:

- Covers important non-traditional machining processes as per VTU syllabus and other universities.
- Maintains a balanced presentation of theoretical concepts and mathematical analysis.
- Contains a large number of solved problems from university question papers
- Questions papers of last 10 years VTU have been solved
- Each chapter contains a consolidated list of short and long questions from VTU and other universities.
- Ideal for students preparing for VTU and other universities examinations.

Contents:

1. Introduction
2. Ultrasonic Machining
3. Abrasive Jet Machining
4. Electro-chemical Machining
5. Chemical Machining
6. Electric Discharge Machining
7. Plasma Arc Machining
8. Laser Beam Machining and Electron Beam Machining

Audience – UG and PG students in Mechanical, Materials Science and Engineering, Automobile Engineering, Aircraft Engineering and Industrial and Production Engineering programs.

Operations Research



C.B. Gupta • P.K. Dwivedi
Sunil Kumar Yadav

ISBN: 978-93-84588-49-6/Year 2016
Size 18 cm × 24 cm/Pages 498
Paperback/₹ 525.00

Designed for B.Tech students the book deals with:

- Introduction & Development of OR
- Linear Programming
- T.P & A.P
- Dynamic Programming
- Theory of Decision
- Game Theory
- Integer Programming
- Inventory Models
- Simulation
- Queuing Theory

Sufficient amount of solved examples and related unsolved questions are also given to related topics. The book would be useful for engineering students as well as students pursuing other streams.

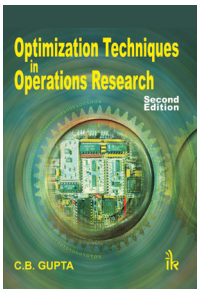
Contents:

Introduction and development of operations research/Linear programming/Transportation problems or "distribution models"/ Assignment problems/Dynamic programming/Theory of decision/ Game theory (competitive strategies)/Integer programming/ Deterministics and stochastic inventory models/Simulation/ Queueing theory (waiting lines)/Index.

Audience – B. Tech. students.

Optimization Techniques in Operation Research

Second Edition

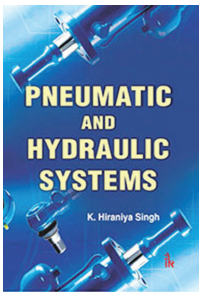


C.B. Gupta

ISBN: 978-93-81141-67-0/Year 2012
Size 16cm × 24 cm/Pages 386
Paperback/₹ 425.00

(See on page 142)

Pneumatic and Hydraulic System



K. Hiraniya Singh

ISBN: 978-93-85909-33-7/Year 2016
Size 18 cm × 24 cm/Pages 356
Paperback/₹ 495.00

Pneumatic and Hydraulic Systems is divided in two sections; with pneumatics as one section and hydraulics in the other section. The various topics dealt with in this book are concise and self-contained with pictorial illustrations, for easy understanding and clear conception. Each chapter has review questions at the end.

Important topics discussed in this book are power source, storage, transmission, service, control systems, power, circuits, feedback, programme, disposal, electropneumatics, actuators, and electro-oilaulic, and so on. This book is designed to help engineering students, and guide technicians from the maintenance department to find faults and rectify.

Salient Features:

- Unique, pictorial presentation of topics for easy comprehension
- Chapters on troubleshooting and maintenance give hands-on tips on fixing day-to-day problems

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

- Industrial standards have been given as reference at appropriate places

Contents:

PNEUMATICS

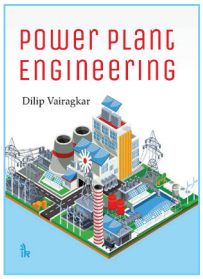
Introduction to pneumatics/ Properties and characteristics of compressed air/ Production and conditioning of compressed air/ Distribution of compressed air/ Pneumatic actuators/ Pneumatic control elements/ Control systems/ Production of circuit diagrams/ Electro pneumatics/ Trouble shooting.

OIL (HYDR)AULICS

Introduction to power hydraulics/ Physical laws of power hydraulics/ Power Hydraulic fluids/ Fluid conditioning and reservoirs/ Hydraulic pumps/ Power Hydraulic actuators/ Control valves/ Servo valves/ Pipe, tube, hose and fittings/ Packing and seals/ Accessories/ Hydraulic circuits/ Standard hydraulic symbols/ Power Hydraulic system maintenance/ Fluid power system compared.

Audience – Diploma in mechanical Engineering, B.Tech (ME) and ME technicians and engineers.

Power Plant Engineering



Dilip Vairagkar

ISBN: 978-93-86768-33-9/Year 2019
Size: 16 cm × 24 cm/Pages 1200
Paperback/₹ 1045.00

Power Plant Engineering is meant for Mechanical Engineering students. All the modes of power generation, i.e., from coal, gas along with jet propulsion, oil, nuclear, hydropower, wind, solar, biomass, tidal power, geothermal, OTEC (ocean thermal energy conversion) etc., have been studied in detail. International and Indian trends in transmission and distribution, economics of power generation, protection of electrical controls add to the quality of the book. Effect of power plants on the environment has been dealt with in detail. Content of each type of power generation also provides practical aspects like manufacturing of critical power plant components, inspection procedures and standards, criteria for improvement in the performance of the power plant, etc. This empowers the students with practical knowledge. Every chapter provides the progress in technological development of each type of power generation that has taken place around the world as well as its status in India. This book has about 700 figures and 125 tables to make the subject more understandable along with the theory to the students and practising engineers.

Salient Features:

- One full chapter is devoted to each type of power generation.
- Exclusive chapter on supercritical boiler.
- International and Indian trends in transmission and distribution.
- Economics of power generation.
- Protection of electrical controls.
- Effect of power plants on the environment.
- Theoretical part with practical approach for improvement in the performance of the power plant.
- Manufacturing and inspection of critical components of power plant.
- Country-wise details of population, area of country, electricity produced by that country, power demand of the country, per capita consumption, and percentage of people having access to electricity.
- Thermal power plant dealt with extensively.
- Nuclear power plants details.
- Power generation from renewable energy.

Contents:

History of Power Generation

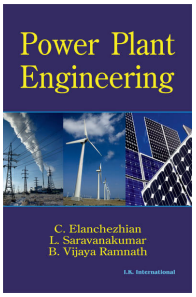
National and Global Overview of Power Sector/Power Generation from Coal/Fossil/Nuclear Fuel/Thermal Power Plant (Basics of Steam Generation)/Coal for Thermal Power Plant/Thermal Power Plant (Boiler and Other Accessories)/Supercritical Boilers/Project Management of Thermal Power Plant/Gas Turbine Power Plant and Jet Propulsion/Diesel Power Plants/Nuclear Power Plant

Power Generation from Renewable Energy/Non-Conventional Energy

Renewable Energy/Hydroelectric Power Plant/Wind Power/ Solar Power/Power from Biomass/Power Grid Transmission and Distribution/Electricals in Power Plant/Economics of Power Generation/Electrical Pricing/Tariff/Aspects Related to Environment/Glossary/Some Questions and Answers/Index

Audience – BE & BTech students of Mechanical Engineering.

Power Plant Engineering



C. Elanchezhian
L. Saravanakumar
Vijaya Ramnath

ISBN: 978-81-89866-30-3/Year 2007
Size 15.5 cm × 23 cm/Pages 356
Paperback/₹ 395.00

Power Plant Engineering has been designed for the students of B.E./B.Tech Mechanical Engineering. This book will also prove to be a valuable resource for practising engineers and teachers.

The present book provides all the necessary information about power plants and steam power plant, nuclear and hydel power plants, diesel and gas turbine power plants, geothermal plants, ocean thermal plants, tidal power plants, solar power plants and economics of various power plants.

Salient Features:

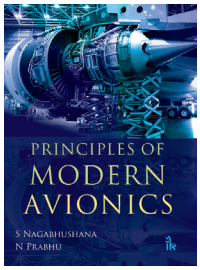
- Each chapter is accomplished with solved problems.
- Text has been supplemented with illustrated diagrams, tables, flow charts, and graphs wherever required, for clear understanding of students.
- Summary, at the end of each chapter to review literature presented in the chapter.
- Review questions and exercise problems have been designed to enhance the engineering skills of students.

Contents:

1. Introduction to Power Plants and Boilers
2. Steam Power Plant
3. Nuclear and Hydel Power Plants
4. Diesel and Gas Turbine Power Plant
5. Other Power Plants and Economics of Power Plants.

Audience – B.E./B.Tech. Mechanical Engineering students.

Principles of Modern Avionics



S. Nagabhushana
N. Prabhu

ISBN: 978-93-85909-89-4/Year 2018
Size 18 cm × 24 cm/Pages 296
Paperback/₹ 495.00

The book presents the conceptual foundations of modern avionics systems. Specifically, it contains a discussion of the principles underlying the prominent devices, circuits, sensors and subsystems used in avionics, complemented by an overview of the avionics design and certification processes. Following the discussion of foundational principles the book also presents the state of the art in civilian and military avionics, and concludes with a preview of the imminent advances in avionics.

The book is concise, yet considerably comprehensive.

Salient Features

- Emphasis on foundational principles of avionics.
- Description of the prominent avionics systems
- Concise overview of the design and certification standards for avionics
- Discussion of the state of the art in civilian and military avionics.

- Case studies of avionics in Boeing 787 Dreamliner and F-35 Lightning II fighter aircraft.

Contents:

Overview of Modern Avionics/Avionics Systems: Design and Certification/Principles of Avionics/Sensors/Avionics in Civilian Aircraft/Avionics in Military Aircraft/Future of Avionics/Appendices/Bibliography/Index

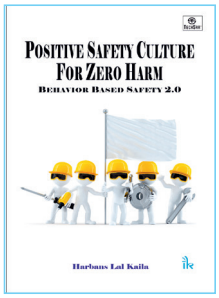
Audience – Mechanical Engineering, Aerospace and Aircraft Engineering/Instrumentation Technology

Positive Safety Culture for Zero-Harm

(Behaviour Based Safety 2.0)

Dr. Harbans Lal Kaila

New



ISBN: 978-93-90620-99-9/Year 2023
Size 14.5 cm × 21.5 cm/Pages 136
Paperback/₹ 225.00

Indian industry is not focused on safety culture except a few organizations who are interested in their company's safety culture for business reasons. For most organizations, change of safety culture is difficult to manage and confusing to know even how to begin.

This book is an effort in addition to the previous books published by the author on the same subject. Positive safety culture means saving your company completely from incidents by involving your employees and workers for a few minutes a day in behavioral safety culture. Organizational behaviour and safety or behaviour-based safety (BBS) 2.0 is holistic, not just focusing on behavioural observation but including overall organizational work culture antecedents to achieve better outcomes of positive safety pursuit. This book is contemporary and deals with crucial problems in the industry and suggests remedial measures.

Contents:

1. Safety, Health and Environment What is Lacking? / 2. The Future of Safety, Health and Environment / 3. Psychological Safety Culture / 4. Effect of BBS on Safety Performance / 5. Risk Perceptions / 6. To Be a Global Company with Positive Safety Culture / 7. Resilient Organisations and Positive Safety Culture / 8. Managements Prioritise on the Safety Culture Drive / 9. Passion for Safety Culture Transformation / 10. A Case on Positive Safety Culture / 11. Safety Culture Suffers from Disconnect and Decision Making / 12. Digitalising Positive Safety Culture / 13. Success and Challenges of Positive Safety Culture / 14. Total Safety Culture Interventions / 15. Linking Safety Behaviour to Key Performance Indicators (KPI) / 16. Human Factors and Human Error in Safety Culture / 17. Cultural Safety and Diversity / 18. Integrating Total Safety Culture Interventions with Organisational Behaviour / 19. Fixing Accountability Levels to Mobilise Positive Safety Culture / 20. Rewarding Workers for Safety Cultural Change / 21. Three Months E-Training Course / 22. Behaviour Based Safety (BBS) 2.0 / Index

Audience – Students in Business and Industrial Management.

Proceedings of International Conference of Advanced Production and Industrial Engineering (ICAPIE 2016)

Editors



Yogesh Singh • S.K. Garg
R.S. Mishra • Vipin

ISBN: 978-93-85909-51-1 (Set)/Year 2016
Size 18.5 cm × 25 cm/Pages 2173
Hardback/₹ 3995.00

This volume is a collection of research works in six main areas, viz., Engineering Materials, Manufacturing Methods, Parametric Optimization, Innovative Design and Analysis, Industrial Engineering, Operations and Management. The chapters published in this volume are research papers selected from International Conference on Advanced Production and Industrial Engineering (ICAPIE 2016), held during 9-10 December 2016, organized by the Department of MPIAE, Delhi Technological University, Delhi, India. These papers demonstrate working procedures for conducting experiments, along with the applications of various techniques. With its coverage and focus, this volume will be immensely useful to scientists and academicians of Production and Industrial Engineering. It will also be useful to research scholars of Mechanical, Production and Industrial Engineering. Post- and undergraduate students may also refer this book for their research/project works.

Audience – Scientists and academicians and research scholars of mechanical, production and industrial engineering.

Proceedings of International Conference on Advanced Production and Industrial Engineering (ICA PIE 2017)

Editors



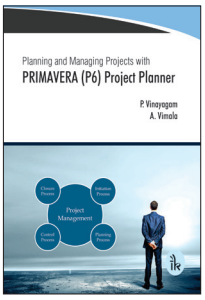
R.S. Mishra • Samsher
Ranganath M. Singari

ISBN: 978-93-84588-07-6 (Set)/Year 2017
Size 18.5 cm × 25 cm/Pages 544
Hardback/₹ 3995.00

This volume of proceedings is a collection of research works designed for use of scientists/teachers of Mechanical, Production & Industrial Engineering. In addition, it will be useful for research scholars in the area of Mechanical, Production and Industrial Engineering. Undergraduate students may also refer this book for their research/project works. This collection demonstrates working procedure for conducting experiments with the application of various techniques. The chapters here are the research papers selected from International Conference on Advanced Production and Industrial Engineering, (ICAPIE 17) held during 6-7 October 2017, organized by Centre for Advanced Production and Industrial Engineering Research (CAPIER), Department of MPIAE, Delhi Technological University, Delhi. India.

Planning and Managing Projects with PRIMAVERA (P6) Project Planner

P. Vinayagam • A. Vimala

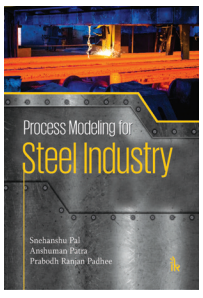


ISBN: 978-93-85909-15-3/Year 2016
Size 18 cm × 24 cm/Pages 182
Paperback/₹ 425.00

(See on page 16)

Process Modeling for Steel Industry

Snehanshu Pal
Anshuman Patra
Prabodh Ranjan Padhee



ISBN: 978-93-85909-39-9/Year 2018
Size 18 cm × 24 cm/Pages 212
Hardback/₹ 795.00

This book contains a detailed account of modeling aspects of all the relevant concerns of steel industry. The text explores the Process Modeling Fundamentals, Basic Concepts of Numerical Heat Transfer and Fluid Flow, Fundamentals of Flow Reactors, Numerical Modeling of

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Different Processes in Steel Industry and Brief Working Guidance for CFD Software Package ANSYS Fluent. Most importantly, this book will help readers to formulate live problem solving strategy in steel making industry.

Salient Features

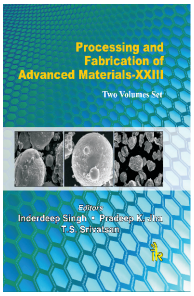
- Basic understanding of the continuum simulation methods related to steel industry.
- Contains sections on numerical methods and use of computer software.
- Process flowcharts, labelled diagrams, solved examples and step-wise mathematical derivations wherever relevant have been included.
- Newer trends in the processes have been delineated appropriately.

Contents:

Introduction/Process Modeling Fundamentals/Basic Concepts of Numerical Heat Transfer and Fluid Flow/Fundamentals of Flow Reactors/Numerical Modeling of Different Processes in Steel Industry/Brief Working Guidance for CFD Software Package ANSYS Fluent

Audience – B.Tech/M.Tech students of Metallurgical Engineering and Mechanical Engineering as well as practising engineers.

Processing and Fabrication of Advanced Materials-XXII



Two Volumes Set
Editors

Inderdeep Singh • Pradeep K. Jha
T.N. Srivatsan

ISBN: 978-93-84588-19-9 (Set)
ISBN: 978-93-84588-17-5 (Volume 1)
ISBN: 978-93-84588-18-2 (Volume 2)
Year 2014/Size 18 cm × 24 cm/Pages 1312
Hardback/₹ 5225.00

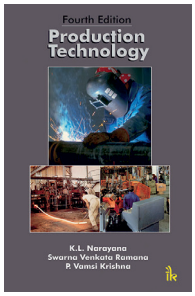
Spread in nine sections which include 123 technical papers, these volumes cover the following areas:

Contents:

Polymer matrix composites/Metal matrix composites/Nano composites/Advanced manufacturing/Welding technology/ Characterization of materials/Modeling and simulation/ Manufacturing process/Advanced materials

Audience – Students and teachers of B.E./B.Tech, M.Sc (Electronics), M.Sc (Tech), M.Sc (Physics), AMIETE and AMIE.

Production Technology



Fourth Edition

K.L. Narayana
Swarna Venkata Ramana
P. Vamsi Krishna

ISBN: 978-93-86768-08-7/Year 2018
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 325.00

Production Technology is intended for the students of B.Tech in Mechanical, Production and Manufacturing Engineering. It deals with fundamental concepts of Foundry, Forming, Welding technologies and Foundry mechanization. Additionally, material regarding furnaces, Solidification of castings, Casting defects, Metals and alloys and Plastics has been provided.

The book covers both theoretical and analytical concepts. The analytical concepts are introduced starting from fundamentals for easy comprehension. Several worked examples, review and objective type questions are provided at the end of each chapter. More than 150 line sketches are included, which are self-explanatory and easy to reproduce in the examination.

Salient Features

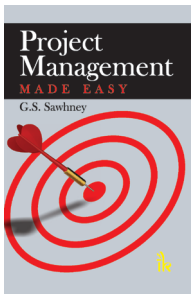
- The subject matter consists of both analytical and theoretical concepts of production technology.
- Profusely illustrated with line drawings.
- Important processes include advantages, limitations and applications.
- Provides end-of-the-chapter review questions and objective-type questions with answer keys.

Contents:

Fundamentals of Metal Casting/ Moulding and Casting Processes/ Furnaces, Solidification of Castings and Casting Defects/ Gating and Risering of Castings/ Foundry Mechanization/ Welding Fundamentals/ Welding Processes/ Defects, Testing and Economics of Welding/ Metal Working/ Extrusion and Forging/ Sheet Metal Working/ Plastics/ Metals and Alloys/ References/ Index

Audience – B.E & B. Tech students of Mechanical Engineering.

Project Management *Made Easy*



G.S. Sawhney

ISBN: 978-93-81141-96-0/Year 2012
Size 16 cm × 24 cm/Pages 300
Paperback/₹ 355.00

The aim of Project Management, is to achieve successful completion of a project within time, cost and quality standards. The book is designed for undergraduate and postgraduate students of mechanical engineering, industrial engineering, production engineering and management studies. The book is in question-answer form to make the text pricise and easy to understand.

Salient Features:

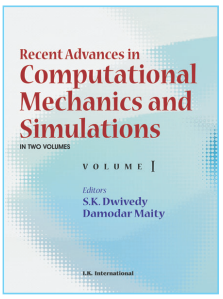
- The text matter has been presented in question-answer form
- Easy to follow and designed as a self learning book
- Includes all possible type of questions in each chapter
- Coverage includes concept of project, project management, project organization, project contracts, project appraisal, cost and performance analysis, planning and scheduling techniques, network cost system and crashing, resource consideration in network, computers in project management, special projects and new management concepts
- Includes previous years solved questions of university examinations
- A quick and precise aid for preparation and revision for examination.

Contents:

Concept of Project/Project Management and Scope/Project Organization/Project Contracts/Project Appraisal/Project Cost and Performance Analysis/Planning and Scheduling Techniques/ Network Cost System and Crashing/Resource Consideration in Network/Computers in Project Management/Special Projects and New Management Concepts/Index

Audience – B.E. and B. Tech. Engineering students.

Recent Advances in Computational Mechanics and Simulations *Two Volume Set* (Editors)



S.K. Dwivedy
Damodar Maity

ISBN: 978-81-89866-16-8 (Set)/Year 2007
Size 18.5 cm × 25 cm/Pages 2173
Paperback/₹ 4995.00

The aim of the *Recent Advances in Computational Mechanics and Simulations* is to provide an opportunity for industry to share their research findings to further the cause of computational mechanics.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

The present book, divided into two volumes, contains 296 contributed full-length papers encompassing three broad areas of Computational Solid Machanics, Fluid Mechanics and Multi Physics.

Contents:

Volume I: Composite Structures/Fracture and Damage Mechanics/Fracture and Damage Analysis for Composite Structures/Vibration and Control/Vibration and Control for Composite Structures/Smart Structures/Electro-Mechanics/Magnetics/Nonlinear Mechanics/Structural Analysis/Computational Techniques in Structures.

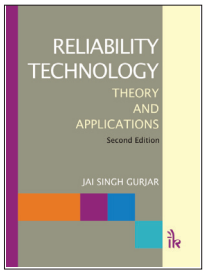
Volume II: Fluid Flow /Turbulence Modeling/Hydrodynamics/Multiphase Flow/Wave Dynamics and Tsunamis/Fluid-Structure Interaction/Porous Media Mechanics/Computational Techniques in Fluids/Transient Dynamic Problems/Heat Transfer/Geomechanics/BridgeandDamStructures/Biomechanics/MicroandNano-Mechanics.

Audience – Scientists, Engineers and Designers.

Reliability Technology

Theory and Applications

Second Edition



Jai Singh Gurjar

ISBN: 978-93-81141-14-4/Year 2012
Size 18 cm × 24 cm/Pages 160
Paperback/₹ 195.00

The present book discusses the application of reliability theory/technology to process industries and other systems.

It provides system modeling and solution techniques in systematic and understandable manner for complex systems. Maximum types of systems are covered for analysis and maximum techniques are demonstrated by solving complex practical problems.

It also discusses basic concepts of reliability, modeling and solution techniques. Almost all types special systems are discussed. Seven important industries and three other special systems are discussed. It is to be mentioned that there is no other book available containing at one place the discussion of such systems and techniques.

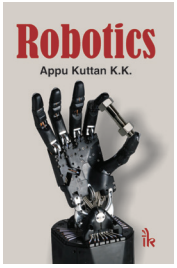
A *Gupta and Sing Graphical Technique* is useful to the practical reliability engineers without both-ering with equations and we obtain many more parameters at once.

Contents:

Introduction/Probability, Probability Distributions and Stochastic Processes/Important Concepts in Reliability Study/System Modeling and Solution Techniques/Reliability Analysis of Some Electrical-Electronics, Telecommunication and Mechanical Systems/Reliability Technology in Process Industries/Reliability Technology Applied to Agro-based Industries/Availability Analysis of a Biogas Plant and a Plant Pathological System/Bibliography/Index

Audience – Engineering students studying reliability theory/technology at graduate level and research level.

Robotics



Appuu Kuttan K.K.

ISBN: 978-81-89866-38-9/Year 2007
Size 18 cm × 24 cm/Pages 326
Paperback/₹ 395.00

Robotics is an applied engineering science that has been referred to as a combination of machine tool technology and computer science. It includes diverse fields such as machine design, control theory, microelectronics, computer programming, artificial intelligence, human factors and production theory.

The present book provides a comprehensive introduction to robotics. The book covers a fair amount of kinematics and dynamics of the robots. It also covers the sensors and actuators used in robotics system. This book will be useful for mechanical, electrical, electronics and computer engineering students.

Salient Features:

Latest technological developments in robotics:

- Robotic classifications, robot programming, robotic sensors and actuators.
- Kinematics and dynamic analysis of the Robot Modular systems in robotics

Advances in robotics systems:

- Fuzzy logic control in Robotic systems
- Biped robot
- Bio-mimetic robot
- Robot safety and layout
- Robot calibration
- Numerical examples
- Relative merits and demerits of different robot systems.

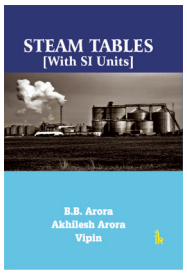
Contents:

Fundamentals of Robotics/Robot Programming and Modular Components/Robot Sensors/Robot Actuators/Motion Conversion and Drives/Mathematical Modeling of a Robot/Dynamics of Robot/Advanced Robot Systems/Appendices/Index.

Audience – Mechanical, Electrical, Electronics and Computer Engineering students.

Steam Tables

(with SI Units)



B.B. Arora • Akhilesh Arora • Vipin

ISBN: 978-93-84588-53-3/Year 2015
Size 18 cm × 24 cm/Pages 88
Paperback/₹ 225.00

Performance analysis of boilers, steam turbines, plant process and other mechanical equipment connected with power generation require the thermodynamic data and transport properties of water and steam which are essential for the design, performance specifications.

The Tables contain thermodynamic properties of water and steam which covers the whole practical range being practiced in power plants and process industries. The salient feature of this table is that the properties of steam have been given for a wide range of temperatures and pressures.

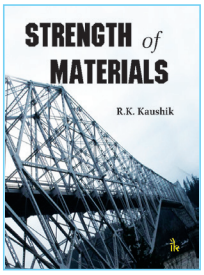
The subject matter is intended for practicing Engineers in power plants and process industries and students pursuing undergraduate and postgraduate courses in Engineering. It also helps the students preparing for AMIE and competitive examinations such as GATE, IES, PSU and civil services etc.

Contents:

1. Saturation Temperatures and Properties of Water and Steam
2. Saturation Pressures and Properties of Water and Steam
3. Superheated Steam Properties (Pressure Base)

Audience – UG/PG Student of Mechanical Engineering and Material Science

Strength of Materials



R.K. Kaushik

ISBN: 978-93-84588-43-4/Year 2016
Size 18cm × 24cm/Pages 704
Paperback/₹ 595.00

This book comprehensively covers all the major topics involving application of concepts of strength of materials which a mechanical engineer encounters day to day. Structural and machine elements which come under the purview of this subject and covered in the book are: beams of all kinds; thin and thick cylinders and spherical cells;

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400 info@ikinternational.com

columns and struts; bars; discs and cylinders; springs; frames; dams; trusses and so on. Solid mechanics parameters covered in the book are all the types of stresses and strains, torsion, bending moments, moments of inertia, centre of gravity, elastic constants, and so on. Various theories of elastic failure have been covered in a focused chapter. A dedicated chapter on mechanical testing of materials will aid students in understanding how strength of materials is determined in laboratory conditions.

With its coverage and approach, this book will be immensely useful to the students of B. Tech (Mechanical Engineering) as well as that of A.M.I.E. (India). It will also be useful for competitive examinations like GATE, IES and civil services..

Salient Features:

- At the end of the chapters a large number (more than 300) of questions have been given
- The text is supplemented with line diagrams/pictures profusely so that the students can understand the concepts easily.
- The topics are discussed in a sequence of gradually increasing level of difficulty, so that it is easier for the students to follow the topics after building appropriate background strongly
- Relatively difficult topics like principal stresses, theory of failure, bending of curved bars, thick cylinders, strain energy, continuous beams, fixed beams, etc., have been treated with special care to see that the material is accessible to all students.

Contents:

Introduction/ Stress and strains/ Temperature stress and strain/ Elastic constants/ Principal stresses and strains/ Shearing force and bending moment/ Centre of gravity/ Moment of inertia/ Bending of beams/ Shear stress in beams/ Torsion/ Thin cylindrical and spherical shells/ Thick cylinders and spheres/ Deflection of beams/ Shear energy, impact loading and deflection due to bending/ Theories of elastic failure/ Combined stresses (direct, bending,torsion)/ Fixed beams/ Continuous beams/ Springs/ Columns and struts/ Bending of curved bars/ Unsymmetrical bending/ Rotating discs and cylinders/ Frame works/ Dams/ Riveted joints/ Welded joints/ Mechanical testing of materials/ Miscellaneous solved problems: Stresses and Strains/ Index.

Audience – B.Tech students in Mechanical Engineering and also Civil Engineering.

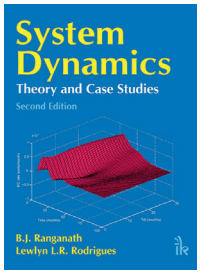
System Dynamics
Theory and Case Studies

Second Edition

B.J. Ranganath
Lewlyn L.R. Rodrigues

ISBN: 978-93-81141-18-2/Year 2011
Size 16 cm × 24 cm/Pages 146
Paperback/₹ 295.00

(See on page 287)



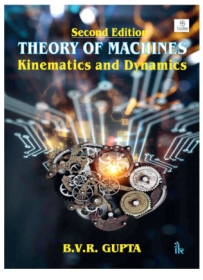
Theory of Machines Kinematics and Dynamics

New

Second Edition

B.V.R. Gupta

ISBN: 978-93-90620-82-1/2023/
Size: 18cm × 24cm/Pages: 560
Paperback/₹ 625.00



The theory of machines is an important subject not only in the mechanical engineering discipline but also in other engineering disciplines. All products whether they are mechanical, electrical, civil, computers or electronic, are designed, manufactured and maintained by mechanicals only. This is one of the interesting and useful subjects which deals with mechanisms and machines. The book covers both the kinematics and dynamics of machines. The book will be useful not only for degree-level students of mechanical engineering but also to those preparing for AMIE and various other competitive examinations.

Salient Features:

- Covers both kinematics and dynamics of machines;
- Explains with graphical and analytical methods;
- MCQs and short answer questions for self-assessments;

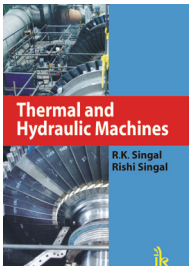
Contents:

Simple Mechanisms/Mechanisms with Lower Pairs/Velocities and Accelerations in Mechanisms/Inertia Forces in Reciprocating Parts/ Turning Moment Diagrams and Design of Flywheel/Friction/ Governors/Belt, Rope and Chain Drives/Gyroscope/Cams/Toothed Gearing/Gear Trains/Balancing of Rotating Masses/Balancing of Reciprocating Masses/Longitudinal and Transverse Vibrations/ Torsional Vibrations/Bibliography/Index

Thermal and Hydraulic Machines

R.K. Singal • Rishi Singal

ISBN: 978-93-81141-26-7/Year 2011
Size 16 cm × 24 cm/Pages 328
Paperback/₹ 385.00



"Thermal and Hydraulic Machines" has been introduced as a core subject for Electrical, Electronics, Mechanical and other branches of engineering by various technical universities. The present book has been designed to meet the requirements of teachers and students for the same.

Spread in ten chapters the book has been divided into the following five units:

- Thermodynamics and Vapour Power Cycles
- Steam Turbine and Gas Turbine
- Compressors and I.C. Engines
- Hydraulics and Hydraulic Turbines
- Hydraulic Pumps.

The book, written in simple language, is duly supplemented by solved numerical problems, diagrams and mathematical analysis.

Contents:

Unit I: Thermodynamics and Vapour Power Cycles/Thermodynamics: Basic Concepts/Vapour Power Cycles

Unit II: Steam Turbine and Gas Turbine/Steam Turbine/Gas Turbines

Unit III: Compressors and I.C. Engines/Compressors/I.C. Engines

Unit IV: Hydraulics and Hydro Turbines/Impact of Jet/Hydraulic Turbines

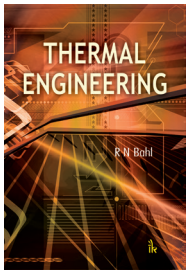
Unit V: Hydraulic Pumps/Centrifugal Pumps/Reciprocating Pump/ Annexures/Index

Audience – Electrical, Electronics and Mechanical engineering students.

Thermal Engineering

R.N. Bahl

ISBN: 978-93-85909-29-0/Year 2017
Size 18 cm × 24 cm/Pages 1128
Paperback/₹ 865.00



Thermal Engineering covers a wide range of topics, starting from the fundamentals of thermodynamics and concluding with thermal engineering applications. It has been

written exhaustively to meet the requirements of the syllabi of different universities in this subject for courses for undergraduate students of mechanical, automobile, aeronautical, chemical engineering as well as AMIE (India) Section-B, UPSC and Indian Engineering Services examinations. Consistent use of SI units is maintained throughout the book.

Salient Features:

- Covers the two courses—engineering thermodynamics, and applied thermodynamics and thermal engineering.
- Presents the subject matter in a very systematic and easy-to-understand manner.
- Helps the beginners to build up the concepts and amplify their understanding of the concepts using the basic knowledge.
- Each chapter is saturated with much-needed text supported by neat and self-explanatory diagrams.
- A large number of solved examples, properly graded, have been added in various chapters.
- At the end of each chapter, Summary, Glossary and Review Questions have been added to make the book a complete text in all respects.

Contents:

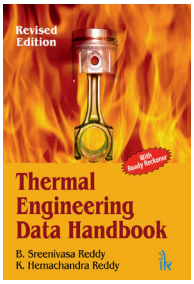
Basic concepts of thermodynamics/ P-V-T surfaces and properties of ideal gas/ Working substance/ First law of thermodynamics/ The second law of thermodynamics and entropy/ Availability and irreversibility/ Properties of steam/ /Steam generators/ Boiler mountings and accessories/ Boiler draught/ Performance of boilers/ Fuels and combustions/ Ideal gas mixture/ Real gases/ General thermodynamics relations/ Vapour power cycles/ Air power cycles/ Introduction of steam engines/ Steam nozzles/ Steam turbines/Condenser and cooling towers/ Internal combustion engines/ Advance topics of internal combustion/ Reciprocating air compressor/ Rotary compressor/ Gas turbines and jet propulsion/ Refrigeration/ Psychrometry/ Air-conditioning/ Heat transfer/ Nuclear power plants/ Conventional and non-conventional power generation system/ Direct energy conversion.

Audience – B.Tech and M.Tech students of Mechanical/Industrial/ Production/Automobile/Aeronautical/ Chemical Engineering. Practicing engineers and researchers in the field.

Thermal Engineering Data Handbook

Revised Edition

(With Ready Reckoner)



B. Sreenivasa Reddy
K. Hemachandra Reddy

ISBN: 978-81-89866-32-7/Year 2011
Size 18 cm × 24 cm/Pages 260
Paperback/₹ 395.00

This book has been prepared keeping in mind the need of a data book that covers all the areas in thermal engineering curriculum, namely, thermodynamics, heat and mass transfer, refrigeration and air-conditioning and solar energy. The data books generally available in the market are specific to any one of the above subjects but not all. The availability of such book as this makes the task of academic sections much easier as the need to supply to the students separate data books each for steam properties/tables, refrigerant tables/charts, heat transfer correlations, solar constants etc. in university examinations will be eliminated.

The book presents properties of various materials, tables/charts, formulae and empirical relations concerned with thermal engineering curriculum. The subject matter has been developed and compiled logically and integrated around a coherent central theme. This book will cater to the needs of undergraduate and postgraduate students of Mechanical, Industrial and Production, Chemical, and Aeronautical Engineering disciplines and also practising engineers.

Salient Features:

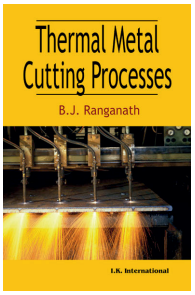
- Detailed chapters on Thermodynamics, Heat and Mass Transfer, Refrigeration and Air-conditioning, and Solar Energy.
- Illustrative figures, wherever required.
- S.I. units are consistently used throughout the book.
- Comprehensive presentation of contents in the beginning for quick reference.

Contents:

Thermal Science/Heat and Mass Transfer/Solar Energy/ Appendix-A/Appendix-B/Appendix-C/References/Index.

Audience – UG and PG students of Mechanical, Industrial and Chemical and Aeronautics.

Thermal Metal Cutting Processes



B.J. Ranganath

ISBN: 978-81-89866-90-7/Year 2008
Size 16 cm × 24 cm/Pages 326
Hardback/₹ 495.00

In order to meet the challenges of manufacturing sophisticated components in modern space, transport, nuclear, electronic and computer technology applications, many new manufacturing methods have been developed. Among such methods, metal cutting processes using thermal energy play an important role, especially in the metal cutting industries. Such thermal metal cutting processes need a good understanding of physics, mathematics, material science, thermal and fluid science, computers and computational techniques.

The basic principles of different thermal cutting processes are discussed with enough depth and breadth. These principles are supplemented with engineering and technology of working, equipment and applications.

The analysis of a cutting process with multiple process variables being complicated requires reliable optimization techniques for its useful application. Techniques like Artificial Neular Network, multivariant regression analysis, ED × A and SEM methods are illustrated for better understanding of the intricacies of these processes.

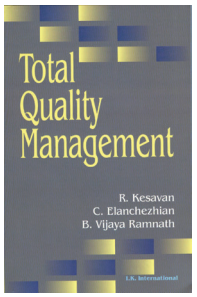
The book is targeted for students, researchers, practising engineers and professionals in metal cutting industry.

Contents:

Classification/Electric Discharge Machining (EDM)/Wire EDM Process (WEDM)/Laser Machining/Electron Beam Machining/ Plasma Arc Machining/Oxy-Fuel Cutting/Arc Cutting of Metals/ Appendix/References/Index.

Audience – Students Researcher, Practising Engineers and Professionals in Metal Cutting Industry.

Total Quality Management



R. Kesavan • C. Elanchezhian
B. Vijaya Ramnath

ISBN: 978-81-89866-86-0/Year 2008
Size 16 cm × 24 cm/Pages 336
Paperback/₹ 445.00

Total Quality Management is meant for B.E./B. Tech. courses. This is also a valuable asset for Industrial Engineers and beginners in the area of Quality Management.

This book provides all necessary information about Quality, Leadership, TQM Principles, SPC, TQM Tools and Quality Systems.

The subject matter has been presented in a simple and systematic manner. To familiarise the student about expected type of questions

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

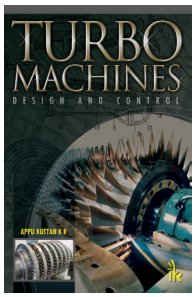
in the examinations, review questions have been provided at the end of each chapter. Also, important short questions with answers are provided for the benefit of the students.

Contents:

1. Quality
2. TQM Principles
3. Statistical Process Control (SPC)
4. TQM Tools
5. Quality System/Appendix/University Question Papers/Index.

Audience – B.E./B.Tech students.

Turbo Machines
Design and Control



Appu Kuttan KK

ISBN: 978-93-82332-13-8/Year 2013
Size 18 cm × 24 cm/Pages 146
Paperback/₹ 455.00

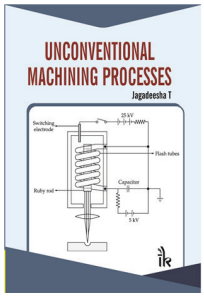
Turbomachines: Design and Control is designed to serve as a textbook for undergraduate and postgraduate students of Mechanical Engineering and Aerospace Engineering. It covers the design aspects of thermal power plant, jet engines, wind mill, etc. Major areas on the design of turbomachines covers basic design of aerodynamic principle, velocity diagram and its applications in the design of radial and axial flow machines, thermodynamic analysis of the turbomachines. A chapter is included in the design of controller for the speed control of turbo-machines which includes classical control theory and multivariable control theory. For basic understanding a chapter on units and dimensions and compressible fluid flow is also included.

Contents:

Units and Dimensional Analysis/Foundation on Compressible Fluid Flow/Flow Past Immersed Body/Classification and Analysis of Turbomachines/Radial Flow Turbomachines/Axial Flow Turbomachines/Thermodynamic Analysis of Turbomachines/System Modeling and Control of Turbomachines/Special Topics in Turbomachies/Index.

Audience – BE, B.Tech Mechanical Engineering.

Unconventional Machining Processes



Jagadeesha T

ISBN: 978-93-85909-11-5/Year 2016
Size 18 cm × 24 cm/Pages 520
Paperback/₹ 645.00

It is now well established that unconventional machining processes are able to meet the challenges posed by the demand for economic machining of ultra-hard and high strength materials to close tolerances. Over the last decade, most of unconventional processes emerged swiftly from the laboratory research to production lines across the country due to demand from diversified industries such as automotive, aircraft, biotechnology, chemical and nuclear industries. In this sense, they are no more unconventional or non-traditional; rather advanced machining processes.

This book addresses issues essential to unconventional machining processes, covering all modern machining processes such as mechanical processes, electrochemical and chemical metal removal processes, and thermal metal removal processes. The text continually emphasizes fundamentals and complete mathematical analysis of the processes as well as advanced applications of advanced manufacturing processes and operations. Each of the modern machining processes is discussed in a separate chapter, with the most up-to-date information and an emphasis on the economics of processes. In order to make the concepts easier to understand, a variety of applications are discussed as well as several numerical problems are worked out. The material is written mainly for students in mechanical, materials science and engineering, automobile engineering, aircraft engineering and industrial and production engineering programs.

Salient Features:

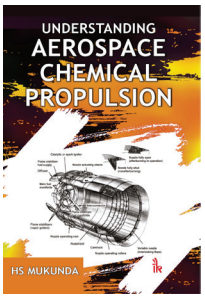
- Covers all the modern machining processes.
- Maintains a balanced presentation of modern machining processes.
- Contains a large number of solved problems.
- Review questions are given at the end of each chapter.
- Each chapter deals with the subject comprehensively with strong emphasis on fundamental concepts.
- Contains more than 300 short questions and answers and multiple-choice questions taken from various university and competitive examinations.

Contents:

Introduction to modern machining processes/Abrasive jet machining/Water jet machining/Abrasive water jet machining/Abrasive flow machining/Magnetic abrasive flow machining/Ultrasonic machining/Ultrasonic welding/Chemical machining/Electro chemical machining/Electro chemical grinding/Electro chemical deburring/Electro chemical honing/Electro polishing/Electro discharge machining/Wire Electro discharge machining/Electro discharge grinding/Electro discharge sawing/Electro stream drilling/Shaped Tube Electrolytic Machining (STEM)/Plasma arc machining/Plasma arc welding/Electron beam machining/Electron beam welding/Ion beam machining/laser beam machining/Thermal deburring/High energy rate forming/Selection of processes/Short questions and answers and multiple objective questions/References.

Audience – UG and PG students of mechanical engineering. Aspirants of GATE, IES and other Engineering Examinations. Reference for researchers and academics in the field of unconventional machining process.

Understanding Aerospace Chemical Propulsion



H.S. Mukunda

ISBN: 978-93-85909-42-9/Year 2017
Size 18 cm × 24 cm/Pages 476
Paperback/₹ 645.00

"I am delighted to read your book titled 'Understanding Aerospace Chemical Propulsion … you have given one of the best gifts to the engineering students and working scientists through this book … I liked Chapter 5 …"

– Dr. APJ Abdul Kalam

Understanding Aerospace Chemical Propulsion is concerned with aeronautical and space chemical propulsion. The book seeks to provide understanding of the propulsion systems through (a) illustrative description of the systems, (b) analysis of modeled systems, (c) examination of the performance of real systems in this light, and (d) provide a comparative assessment of aeronautical and space propulsion system elements wherever relevant. It has eleven chapters covering introduction, specifications, efficiencies, thermos- and gas dynamics, propulsion system analysis, aero-system elements, fuels and performance, rocket combustion process, solid and liquid propulsion systems and combustion instability.

Engineers beginning their career in the aerospace industry would benefit from reading this book. Senior engineers overseeing more than

one group could revisit the fundamental ideas and reconnect with specific tasks.

Salient Features:

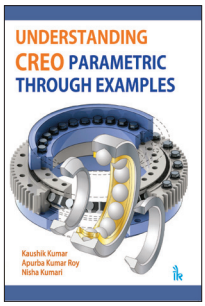
- Covers chemical propulsion as applied in aerospace in a detailed and comprehensive manner, making it a stand-alone text.
- Gives comparison of air breathing and non-air breathing engines, and utilizes data pertaining to both these type of engines for critical appraisal.
- The text is supplemented with well-labelled diagrams at every possible instance, making the topics accessible in a better manner.
- The mathematical equations have been well explained and derived in a step-by-step manner

Contents:

Introduction/ Needs, Specifications/ The Efficiencies/ Thermo-Gas Dynamics/ Air Breathing Propulsion System Analysis/ System Elements/ Fuels and Propellants/ Rocket Combustion Processes/ Solid Rocket Engine/ Liquid Rocket Engine/ Combustion Instability

Audience - Students, scientists and researchers of Aerospace Engineering, Chemical Propulsion Technology/System, Mechanical Engineering and Chemical Engineering. Aerospace professionals.

Understanding CREO Parametric Through Examples



Kaushik Kumar
Apurba Kumar Roy
Nisha Kumari

ISBN: 978-93-86768-04-9/Year 2017
Size 18 cm × 24 cm/Pages 398
Paperback/₹ 545.00

Understanding CREO Parametric Through Examples, as the name suggests, deals with in-depth knowledge about CREO Parametric, a 3D CAD software used for design and product development. CREO Parametric is used by the designers due to various advantages such as parametric and direct modeling, flexibility, interoperability and multi CAD data handling. It provides scalable access to the right capabilities which helps in meeting individual needs while designing a product. The book is divided into six sections. The authors strongly believe that the book is very apt for the engineering courses. The strategy used in this book is simple with step by step techniques so as to enable the readers gain knowledge about the subject. The manufacturing section of the design section makes this book unique as no other book in the market covers this topic.

Salient Features:

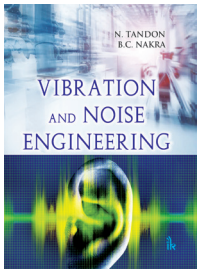
- Parametric and direct modeling, Flexibility, Interoperability and multi CAD data handling.
- Step by step techniques.
- Weak dimensioning in sketching mode and how to modify the dimension; also includes the inspect tool which consists of overlapping geometry, highlight open ends and shade closed loops.
- Manufacturing section not covered in any book.

Contents:

Overview of CREO/Getting started with sketching and draw/ Sketching tools/Editing tools/Constrains/Dimensioning/Get Data/Shapes/Engineering Tools/Editing Tools/Surfaces/Basics of Sheetmetal Design/Assembly/Drawing/Manufacturing/Index

Audience - Engineering courses in universities, libraries, research purposes.

Vibration and Noise Engineering



N. Tandon
B.C. Nakra

ISBN: 978-93-85909-52-8/Year 2017
Size 18 cm × 24 cm/Pages 204
Paperback/₹ 345.00

Vibration and Noise Engineering deals with the fundamentals of mechanical vibrations and noise engineering. The contents have been organized in such a way that the general requirements of the students are fulfilled. The text lays emphasis on mechanical engineering applications of the subject and develops conceptual understanding with the help of many worked-out examples. The book is primarily designed for postgraduate and undergraduate students who are in the later stages of their engineering course. It will also be well-suited for the practitioners.

Salient Features:

- Covers measurement analysis and control of vibration and noise.
- Introductory chapter includes the theory of vibration and covers free and forced signals as well as two degrees of freedom system.
- Various types of transducers and instruments such as, accelerometers, proximity probes, torsional vibration sensors, TEDS and MEMS sensors and laser doppler vibrometer (LDV), available for vibration measurement and analysis are also covered.
- Different microphones, frequency analysis of noise signal using octave and FFT analysis, sound intensity measurement technique and noise source location have been explained.
- Noise pollution due to air, rail and road vehicles has been covered.
- Acoustic materials and various noise control measures such as enclosures, barriers, silencers and active noise control are well described.

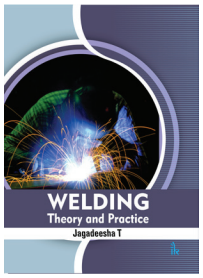
Contents:

1. Introduction to Vibration
2. Vibration Control
3. Introductory Theory of Noise
4. Noise Pollution
5. Mechanical Signatures Analysis
6. Vibrations Measurement and Analysis
7. Predictive Maintenance Systems
8. Noise Measurement and Analysis
9. Noise Control Measures

Audience – Final year/senior undergraduate and postgraduate students of mechanical and related engineering disciplines. Also valuable for practicing engineers in industry as a reference book.

Welding

Theory and Practice



Jagadeesha T

ISBN: 978-81-948676-1-6/Year 2021
Size: 18 cm × 24 cm/Pages 984
Paperback/₹ 1295.00

Welding plays an important role in modern production methods, and has made possible the construction of plants, equipment and structures unattainable by other known methods. It is almost impossible to make a product like automobile, aircraft, etc., without cast components. This book will serve as a bridge between the study of the processes and their applications in production industries. Theory and practice are blended and explained so that the reader gets holistic approach to welding. First, basic processes are discussed, followed by the special processes and design, testing, weldability of systems are

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discussed at the end. The approach to the various aspects of welding design, has been kept as simple as practicable and wherever possible the fundamental features have been stressed. Every effort has been made to comply with the existing and accepted standards and in this respect the nomenclature adopted is consistent with standard specifications.

The book also includes industry data, foundry practices, and realtime industrial applications. Fundamental theory is presented with up-to-date technical information using simple line sketches. This book is meant for the students of B.E, B.Tech. M.Tech and other post-graduate courses. This book will also serve as a useful reference for academicians material researchers, mechanical engineers, professionals in manufacturing and related industries. Several GATE and IES exam questions are solved to make it suitable for the readers who take up competitive exams.

Contents:

Section A: Basic Welding Process

Introduction to Manufacturing Processes/Introduction to Welding Technology/Physics of Arc/Power Sources for Arc Welding/Arc Welding Consumables/Shielded Metal Arc Welding/Gas Metal Arc Welding/Gas Tungsten Arc Welding/Submerged Arc Welding/ Electroslag Welding/Electrogas Welding

Section B: Resistance Welding Processes

Resistance Spot Welding/Resistance Seam Welding/Projection Welding/ Flash and Upset Welding/High-Frequency Welding/ Percussion Welding

Section C: Solid State Welding Processes

Friction Welding/Friction Stir Welding

Section D: Gas Welding and Brazing Processes

Oxyfuel Welding/Brazing, Braze Welding and Soldering

Section E: Advanced Welding Processes

Ultrasonic Welding/Plasma Arc Welding/Electron Beam Welding/ Laser Beam Welding/Underwater Welding

Section F: Allied Welding Processes

Explosive Welding/Metal Flame Spraying/Metallizing

Section G: Miscellaneous Topics in Welding

Welded Design and Fabrications/Thermal Considerations in Welding/Basic Welding Metallurgy/Residual Stress and Distortion/ Weld Defects/Inspection and Testing of Welds/Weldability/Repairs and Maintenance Welding/Multiple Choice Questions/References/ Index

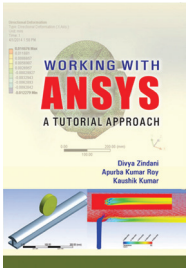
Audience – B.E, B.Tech, M.Tech, Mechanical Engineering.

Working with ANSYS

A Tutorial Approach

Divya Zindani
Apurba Kumar Roy
Kaushik Kumar

ISBN: 978-93-85909-26-9/Year 2017
Size 18 cm × 24 cm/Pages 640
Paperback/₹ 850.00



The essence of this book is the innovative approach used to learn ANSYS software by imitation, i.e. using the examples provided in this book. The primary aim of this book is to assist in learning the use of the ANSYS software through examples taken from various areas of engineering. An attempt has been made to provide the readers with a comprehensive cross section of analysis types, in order to provide a broad choice of examples to be imitated in one's own work. This book is exclusively structured around ANSYS, and no other finite element (FE) software currently available is considered.

The book is divided into four sections. Section I introduces the readers to the brief overview of ANSYS. Section II deals with the APDL part of ANSYS. Section III concentrates on ANSYS using Workbench. It contains tutorials on problems solved using Workbench. Section IV deals with cases of CFD / CFX problems solved using ANSYS. Chapter 20 provides a brief overview of ANSYS CFX. Chapter 21 consists of illustrations to help users use the CFX part of ANSYS in a hassle-free manner.

Salient Features:

- Provides a variety of solved problems using APDL.
- The non-linear structural analysis part is explained with real-life examples.
- A chapter on Composites, which in recent times have been used extensively in aircraft structures, automobiles, sporting goods, and many consumer product, is dealt with.
- The text is well supported by illustrations for a more clear understanding of all the sections of ANSYS.

Contents:

SECTION – I: INTRODUCTION TO ANSYS

Overview of ANSYS

SECTION – II: ANALYSIS USING APDL

APDL Graphical User Interface (GUI)/ Structural Static Analyses/ Modal Analysis/ Harmonic Response Analysis/ Transient Dynamic Analysis/ Buckling Analysis/ Nonlinear Structural Analyses/ Contact Analyses/ Composites/ Sub Structuring/ Steady-State Thermal Analysis/ Transient Thermal Analyses/ Coupled-Field Analysis.

SECTION – III: ANALYSIS USING WORK BENCH

The ANSYS Workbench Interface/ Explicit Dynamic Analysis/ Shape Optimization/ Coupled-Field Analysis/ Contact Analyses

SECTION – IV: ANALYSES FOR CFD / CFX

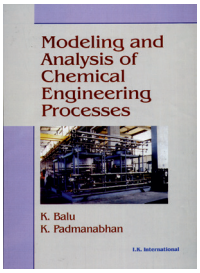
The ANSYS CFD/CFX Interface / Examples of CFD / CFX.

Audience – B.Tech and M.Tech students of all branches, especially Mechanical, Civil and Electronics Engineering. Working engineers, researchers and academicians.

SHOP ONLINE
www.techsarworld.com

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Modeling and Analysis of Chemical Engineering Processes



K. Balu
K. Padmanabhan

ISBN: 978-81-89866-31-0/Year 2007
Size 18 cm × 24 cm/Pages 424
Paperback/₹ 475.00

The book is in two parts. The first part discusses the methods of modeling chemical engineering processes through well known mathematical methods involving numerical calculations. This includes the recent concepts of Fuzzy logic and neural nets. The second part describes the efficient optimization methods, which are available for the effective application in many chemical processes. This involves methods of search for extrema as well as optimization, with and without constraint relations.

Most books on nonlinear programming are of theoretical type, and the exact procedures of computation are often obscure. But in this book, a number of problems have been worked out. In addition to this, computer programs are included for almost all the topics.

Due to the intricacy of optimization programs, the flow charts and the program in clear BASIC language have been provided so that the reader can understand the mathematical methods.

The book will be useful for students and practising engineers in the field of chemical engineering, biotechnology, environmental engineering, and applied mathematics.

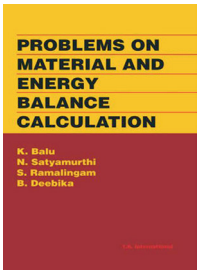
Contents:

Part I: Modeling Through Algebraic, Differential and Partial/ Differential Equations/Transform Techniques/Mathematical Aspects of the Basis of Optimization Methods/Large Systems Analysis-Methods/Index.

Part II: Extrema of Functions and Search Methods/Methods of Numerical Optimization/Some Additional Methods for Optimisation & Constrained Optimisation/Index.

Audience – Students of Chemical Engineering, Biotechnology, Environmental Engineering and Applied Mathematics.

Problems on Material and Energy Balance Calculation



K. Balu • N. Satyamurthi
S. Ramalingam • B. Deebika

ISBN: 978-93-80026-04-6/Year 2009
Size 16 cm × 24 cm/Pages 200
Hardback/₹ 515.00

The present book has problems and solutions in Material and Energy Balance in Process Equipment. This is followed by Energy Balance problems. All problems assume Steady-State system. The text covers the syllabus of all Chemical Engineering institutes offering this course.

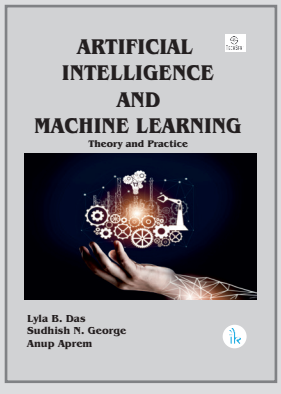
The number and variety of problems proposed in this book are extensive. The problems are organized in each chapter according to the subject matter. It is possible for answers to differ slightly due to different sources of data. The teaching experience of authors convinces that one of the glaring weaknesses of the students in Chemical and Petroleum Engineering is their inability to think clearly and accurately in terms of arithmetic. It is hoped that this book will prove of real value in Process Calculations Instructions in classroom. This can also serve as a refresher book for practising engineers.

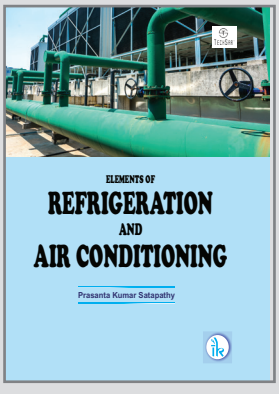
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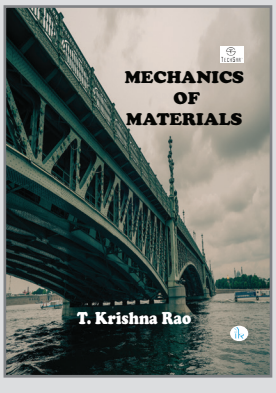
Methods of Expressing Compositions of Mixtures and Solutions/Gas Calculations/Material Balances/Recycle and Bypassing Operations/ Humidity and Saturation/Fuels and Combustion/Problems in Sulphur and Sulphur Compounds Burning Operation/Thermophysics/Index.

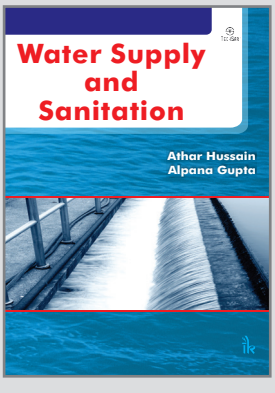
Audience – Chemical Engineering courses.

NEW RELEASES





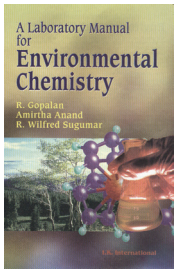




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A Laboratory Manual for Environmental Chemistry



R. Gopalan
Amirtha Anand
R. Wilfred Sugumar

ISBN: 978-81-907462-5-0/Year 2009
Size 14 cm × 21.5 cm/Pages 204
Paperback/₹ 315.00

The present book is meant for the students who opt for a course in *Environmental Chemistry* with laboratory work as a component of the course. Spread in 72 experiments the analyses of soil, water and air have been described in a simple manner so that most of these experiments can be conducted even by the beginners. The principles involved, preparation of the reagents and the procedures are described for each experimental method. This manual would be useful in laboratories where soil, water and air are routinely tested.

Contents:

PART I: WATER ANALYSIS: Principles of Spectrometric Analysis/ Sampling Techniques/Colour/Turbidity/Total Dissolved Solids/ Conductance/pH Value/Acidity/Alkalinity/Dissolved Oxygen/ Chemical Oxygen Demand/Biochemical Oxygen Demand/ Dissolved Organic Carbon/Calcium Hardness of Water/Total Hardness of Water/Nitrate Nitrogen/Nitrate Nitrogen Brucine Method/Ammonia Nitrogen/Fluoride/Fluoride in Drinking Water (by Fluoride Electrode)/Chloride/Residual Chlorine/Sulphide/ Sulphite/Sulphate/Phosphate/Iron/Chromium/Copper/Lead/ Nickel/Cadmium/Mercury/Cyanides/Boron/Selenium/Arsenic/ Suspended Solids/Determination of Chlorophyll-a/Determination of Productivity.

PART II: SOIL ANALYSIS: Collection of Soil Samples/pH Value/ Soluble Salts/Identification of Calcium Carbonate, Nitrogen, Phosphorus and Potassium/Calcium Carbonate/Gypsum Requirement/Lime Requirement/Alkalinity/Organic Carbon/ Total Nitrogen/Available Nitrogen/Ammonium Nitrogen/Nitrate Nitrogen/Nitrite Nitrogen/Available Phosphorus/Available Sulphur/Silica/Available Potassium/Sodium/Calcium and Magnesium/Micronutrient Elements/Pesticide Residues/Separation and Identification of Pesticide Residues from the Soil.

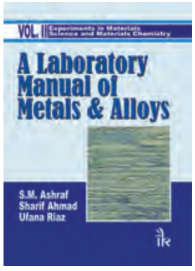
PART III: AIR ANALYSIS: Qualitative Analysis of CO, CO_2, H_2S, SO_2, NO and NO_2/Carbon Monoxide/Carbon Dioxide/Hydrogen Sulphide/Sulphur Dioxide/Nitric Oxide and Nitrogen Dioxide/ Particulates.

PART IV: MISCELLANEOUS: Calcium in Egg Shells/Effect of pH on Germination of Seeds/Effect of Copper Salt on Germination of seeds/Phosphate in Detergents/Benzoic Acid and Sorbic Acid in Soft Drinks/Sulphur Dioxide in Soft Drinks/Identification of Food Adulterants/Appendices/References/Index.

Audience – Chemistry, Chemical, Environmental Science.

A Laboratory Manual of Metals & Alloys

Volume II Second Edition



S.M. Ashraf •Sharif Ahmad • Ufana Riaz

ISBN: 978-93-80578-11-8/Year 2011
Size 14 cm × 21.5 cm/Pages 160
Paperback/₹ 295.00

This compendium of twenty laboratory experiments on metals and alloys attempts to provide to students of Science and Engineering an insight about the relationship of the physical, specially mechanical properties of metals with grain structures/microstructures. In almost all the experiments, therefore, the microstructural investigation is provided. Experiments have also been included on the determination of important mechanical and thermal properties and on the aqueous and atmospheric corrosion of metals. Theoretical background of each experiment has been dealt with in good detail in order to enable the student to understand the underlying principles and to appreciate the significance of the experiments.

Information which could not be accommodated in the text of the experiments, has been provided in the form of appendices. These include: reflection microscopy, experimental determination of transition points through cooling curves to get data for plotting phase diagrams, and quenching media for tempering of alloys. In view of the importance of microstructures for some metals and allaoys have also been given.

This book will be useful to the students of materials chemistry and materials science and students of various engineering courses. It will also be helpful to the students of industrial chemistry, practising engineers in metallurgical and mechanical engineering based industries.

Contents:

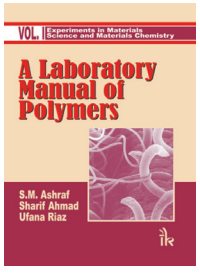
To prepare specimens of some metals and alloys for microstructural examination/To find out the grain size and the relative amount of the constituent phases in single phase and 2-phase alloy systems/To determine the tensile strength, modulus of elasticity, yield stress % elongation and % reduction in area of mild steel, brass and aluminium and to observe necking/To determine the impact values of mild steel and grey cast iron/To determine the hardness values of mild steel and brass by Rockwell hardness testing machine/To find out the hardness number of copper and brass using Brinell's hardness testing machine/ (i) Construction of phase diagram of the binary eutectic alloy of Pb and Sn. (ii) To observe the microstructure of a few specimens of selected compositions of the above alloy system. Also to find out the shape and size of the grains in these specimens along with the relative amount of the constituent phases. (iii) To find out the hardness of the above specimens/To prepare the peritectic alloy of Cu and Zn of the following compositions and to study their microstructure and hardness/To study the microstructure, grain size and hardness of eutectoid hypo-eutectoid and hypereutectoid steel/To study the microstructure and hardness of annealed and normalized plain carbon steel having 0.4% C and 1.2% C, also to study the spheroidized annealing of 1.2% C steel/To study the mechanical properties and microstructures of some hardened plain carbon steel specimens (0.4%, and 1.2% C) on tempering at different temperatures/To study precipitation strengthening/age hardening of Al-4% Cu alloy/To study the effect of time of tempering on the mechanical properties of high carbon steel/To study the effect of precipitation hardening on Al 4% copper alloy at different temperatures on the hardness of the alloy (alternative method)/To study the effect of cooling rate on the transformation in 0.8% C steel/To study the effect of cold working on the hardness of some selected metals and alloys and also effect of annealing on such cold materials/To study the effect of recovery, recrystallization and grain growth (annealing) in a plastically deformed metal on its microstructure (grain structure) and mechanical properties (hardness)/To evaluate corrosion and corrosion inhibition of mild steel in aqueous environment/To evaluate the rate of high temperature oxidation of iron and also observe the morphology of the oxidized specimens/To determine the amount of lead in brass using Differential Scanning Calorimetry (DSC)/Appendices/Index

Audience – Graduate and postgraduate courses in materials cience, materials chemistry and industrial chemistry

A Laboratory Manual of Polymers

Volume I

Second Edition



S.M. Ashraf • Sharif Ahmad
Ufana Riaz

ISBN: 978-93-80578-10-1/Year 2011
Size 16 cm × 24 cm/Pages 136
Paperback/₹ 295.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

This manual on polymers provides meaningful, easy-to-do laboratory activities that will help students in understanding the basic principles of polymer synthesis, structure and functions. It is intended to enable the students prepare a variety of common polymers to investigate their properties as well as to discover their uses and applications. This book is intended to be used as a laboratory manual at the graduate and postgraduate levels in Materials Science as well as other polymer chemistry courses.

The book, divided in 4 main chapters, deals with:

- Different kinds of polymerization reactions as well as their kinetic aspects.
- Detailed spectral, thermal and morphological characterization of polymers.
- Identification of polymers with FT-IR, 1H-NMR, 13C-NMR spectroscopies.
- Thermal characterization of polymers through DSC and TGA techniques.
- Structural characterization with XRD.
- Purification procedures of monomers and solvents.
- 26 experiments and general analytical techniques to characterize common polymers.

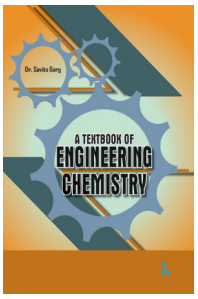
The book will be useful to professionals in the production as well as R&D units of polymer industries.

Contents:

Introduction and Polymerization Reactions/Characterization of Polymers/Purification of Monomers and Polymers/Experiments on the Synthesis, Identification and Characterization of Polymers/Index

Audience – Graduate and postgraduate courses in materials science, polymer chemistry, industrial chemistry.

A Textbook of Engineering Chemistry



Dr. Savita Garg

ISBN: 978-93-90620-19-7/Year 2022
Size: 18 cm × 24 cm/Pages 512
Paperback/₹ 575.00

Engineering Chemistry has been divided into 10 chapters, covering all the disciplines of engineering chemistry such as inorganic, organic, organometallic, synthetic, physical, applied, industrial, spectroscopic and titrimetric chemistry. Each chapter consist of methodical introduction, historical background, in depth discussion, practical applications and significance. A large number of numerical problems drawn from various university examinations are given at the end of theoretical part of each chapter.

The book aims at:

- Developing the techniques to enhance the practicability of experiments.
- Developing analytical capabilities of students so that they can characterize transform and use materials and apply information in solving related engineering problems.
- Developing the habit of scientific reasoning in the students.
- Imparting intensive and extensive information of the subject to understand the role of chemistry in the field of engineering.

I hope this book will prove as a useful tool for students of undergraduate engineering classes and also to teachers in preparing for their lectures. Any suggestion for further improvement of the book is most welcome.

Salient Features:

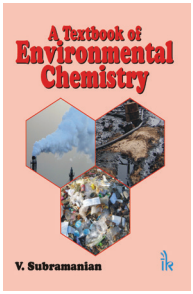
- Topics explained and supported by examples.
- Simple, systematic and logical development of the subject with emphasis on the underlying fundamental concepts, principles and applications.
- Comprehensive question bank at the end of each chapter containing: objective type questions (classified into multiple-choice question and fill in the blanks); review questions and exercise questions.
- Large number of examples (in the body of the text as well as in solved examples) provide manifold opportunities to understand the topics.
- Incorporates thought stimulating exercises, latest examination questions and numerical problems.
- Deals with safety concerns and precautions.

Contents:

Electrochemistry and Energy Storage System/Corrosion and Metal Finishing/Chemical Fuel and Solar energy/Environmental Pollution and Water Chemistry/Instrumental Methods of Analysis and Nanomaterial/Polymer and Organometallics/Organic Reactions and Synthesis of a Drug Molecule/Periodic properties/Nanomaterials/Atomic and Molecular Structure/Model Question Paper

Audience: B.E & B.Tech students.

A Textbook of Environmental Chemistry



V. Subramanian

ISBN: 978-93-81141-19-9/Year 2011
Size 18 cm × 24 cm/Pages 498
Paperback/₹ 545.00

This book addresses key topics related to the broad subject of "Environmental Chemistry". The book tries to present the topics that are essential to understand the chemical processes in our environment— involving air, water, and soil. Chapters that are very much current such as environ-mental nuclear chemistry, analytical tools needed for chemical aspects of our environment, solid waste and management methodology, quality criteria for air and water have all been treated in a simple fashion so that a reader can refer to advanced books in specific topics for better understanding. A brief review of funda-mentals of chemistry is also included. References are listed that are easily available in the subcontinent and also many commonly accessed websites are also mentioned for better and detailed infor-mation on specific topics or sub-topics.

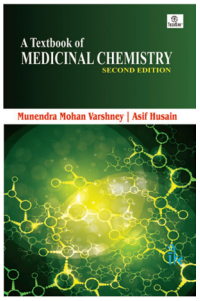
Contents:

A Review of Basic Chemistry/Chemistry of the Earth/Atmospheric Chemistry/Chemical Aspects of Air Pollution/Water Chemistry/Chemical Aspects of Water Pollution/Environmental Chemistry of Soil/Chemical Aspects of Soil Contamination/Waste: Chemistry and Management/Environmental Chemistry of Isotopes/Analytical Techniques/Green Chemistry and Toxic Chemicals in the Environment/Index

Audience – M.Sc., M.Tech./B.Tech Environmental Engineering students.

A Textbook of Medicinal Chemistry

Second Edition



Munendra Mohan Varshney
Asif Husain

ISBN: 978-93-84588-27-4/Year 2023
Size 18 cm × 24 cm/Pages 368
Paperback/₹ 455.00

Medicinal chemistry plays an indispensable role in drugs and chemical domain. Advancement and developments in medicinal chemistry have been taking place rapidly. In this new edition of Medicinal Chemistry, the latest developments in the field

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of medicinal chemistry have been incorporated, and all the important topics, Antibiotics, Quinolones antibacterial, Sulphonamides, Antitubercular agents, Antiviral agents, Antifungal agents, Antiprotozoal agents, Anthelmintic agents and Drug Design have been added.

This book would be valuable to the readers to extend knowledge in respect of several known classes of drug molecules, undergraduate students of pharmacy, and those who have medicinal chemistry as a part of their course curriculum.

Salient Features:

- Detailed coverage of design and developmental aspects of drugs for major common medical conditions along with their mechanisms of action in relation to physiology and anatomy.
- Treatment aspects of medicinal chemistry which include chemical, biological and physical properties of medicinal compounds, synthesizing mechanisms and so on.
- Diagrams of chemical/biochemical structures and schematic flowcharts to illustrate text describing form and processes in medicinal chemistry.
- Fundamentals of quantitative structure activity relationship and heterocyclic chemistry considering its importance in the study of medicinal chemistry.
- End chapter exercises for self-assessment.

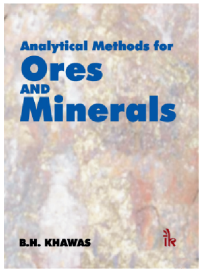
Contents:

Physical chemical factors and biological properties/Autonomic nervous system cholinergic drugs and adrenergic agents/General anaesthetics/Local anaesthetics/Sedative and hypnotics/Opioid analgesics/Anticonvulsant agents/Antiparkinsonism agents/Central nervous system stimulants/Antipsychotic drugs/Antidepressant drugs/Antianxiety drugs/Skeletal muscle relaxants/Neuromuscular blocking agents/Antibiotics/Quinolones Antibacterials/Sulphonamides/Antitubercular agents/Antiviral agents/Antifungal agents/Antiprotozoal agents/Antithelmintic agents/Drug design./General consideration of heterocyclic chemistry concept/Index

Audience – B. Pharma.

Shelving – Medicine/Pharmacy/Nursing/Chemistry & Chemical Science.

Analytical Methods for Ores and Minerals



B.H. Khawas

ISBN: 978-81-89866-54-9/Year 2013
Size 18 cm × 24 cm/Pages 392
Hardback/₹ 1495.00

This book exclusively covers well tested analytical methods for their accuracy and versatility for ores and minerals of most of the elements.

The present book covers methods of analysis of most of the minerals right from alkali metals to zirconium. The methods given in the book are well tested and practices in laboratories engaged in analysis of ores and minerals. The book also covers topics on fundamental principles of analytical chemistry, computation of analytical data, error and precision in analytical results, etc. A chapter is dedicated to the management of analysis and safety in laboratory in order to give an idea to chemists that how to proceed for analytical work in a well planned and systematic way with all precautions to be taken for safety. The principles of management applied for laboratory organization will definitely help the laboratory managers in ensuring smooth and speedy work with quality.

The principle of analysis is discussed in the beginning of each method to understand the theoretical aspects and reactions involved in the course of analysis. This will help the reader to understand the theory of analysis and role of each reagent used. For determination of major radicals in the ore, conventional chemical methods of analysis are suggested whereas instrumental methods are suggested for elements present in minute quantity.

The book will be useful for students as well as analytical chemists engaged in the field of analysis of ores and minerals.

Contents:

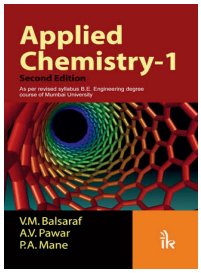
Ores, Minerals and Rocks – A Brief Introduction/General Principles of Analysis/Statistical Treatment of Analytical Data/Management of Laboratory and Safety/The Alkali Metals/Aluminium Ores/Antimony Ores/Arsenic Ores/Barium Ores/Beryllium Ores/Bismuth Ores/Boron Minerals/Cadmium Ores/Calcium and Magnesium Minerals/Chromium Ores/Cobalt Ores/Copper Ores/Fluorine Minerals/Germanium Ores/Gold Bearing Ores/Iron Ores/Lead Ores/Manganese Ores/Mercury Ores/Molybdenum Ores/Nickel Ores/Phosphorous Minerals/Polymetallic Ores/Selenium and Tellurium Minerals/Silicon and Siliceous Materials/Silver Ores/Sulphur Ores/Tin Ores/Titanium Ores/Tungsten Ores/Zinc Ores/Zirconium Ores/Index

Audience – Students of Analytical Chemistry and Teachers & Professionals engaged in analysis of Ores and Minerals

Applied Chemistry

(Volume I)

Second Edition



V.M. Balsaraf • A.V. Pawar
P.A. Mane

ISBN: 978-93-80578-55-2/Year 2010
Size 16 cm × 24 cm/Pages 232
Paperback/₹ 425.00

Applied Chemistry-I is as per the syllabus of Mumbai University which is common to all the engineering branches. The book is organised in such a way that the students can acquire the knowledge of applications of chemistry in Engineering and Technology. Each chapter has been dealt with in sufficient detail with ample number of numerical problems and illustrations wherever required. Sufficient number of solved problems with quite a large number of university questions have also been provided.

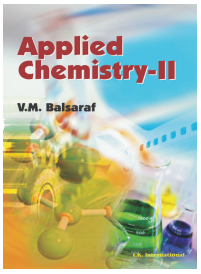
Contents:

Polymers/Water/Lubricants/Energy/Phase Rule and Steels/Nanomaterials/Experiments/Model Question Paper/Index.

Audience – B.E. and B.Tech. students.

Applied Chemistry

(Volume II)



V.M. Balsaraf

ISBN: 978-81-907770-9-4/Year 2009
Size 16 cm × 24 cm/Pages 196
Paperback/₹ 315.00

Applied Chemistry-II is meant for the first year students of all branches of engineering. This book provides clear and sufficient understanding of the subject to the students. The contents are organized in such a way that the student can acquire the knowledge of applications of chemistry in engineering and technology. Each chapter has been covered in detail with principles of chemistry with its applied aspects and a variety of numerical problems wherever required. Additional questions and previous years' university questions are included at the end of each chapter. A laboratory manual comprising nine experiments is also appended at the end of the book.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

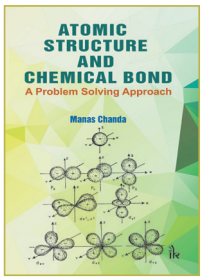
Contents:

Corrosion/Alloys/Fuels/Green Chemistry/Composite Materials/Catalysis/Experiments/Model Question Paper/Index.

Audience – B.E. and B.Tech. students.

Atomic Structure and Chemical Bond

A Problem Solving Approach



Manas Chanda

ISBN: 978-93-86768-36-0/Year 2019
Size: 16 cm × 24 cm/Pages 392
Paperback/₹ 525.00

Covering most of the topics taught in university courses in quantum chemistry, this authoritative text provides modern concepts of atomic and molecular structure as well as chemical bond.

Brief historical account of the origin of quantum theory, its applications to the problem of atomic spectra and atomic structure have been discussed. Electronic configuration of atoms based on the four-quantum-number system, symbols for atomic states, and classification of elements and their distribution in the periodic table have been given a comprehensive treatment.

Postulates of quantum mechanics, quantum-mechanical operators, Hamiltonian operator, derivation of Schrödinger equation, its application to particle-in-a-box and to the hydrogen atom, quantization of energy levels, uncertainty principle, probability distribution functions, angular and radial wave functions, nodal properties, sectional and charge-cloud representation of atomic orbitals, etc., have been covered in detail.

The valence bond and molecular orbital methods of bonding, hybridization, orbital structure of common hydrocarbons, bonding in coordination compounds based on valence bond and ligand field theories, the concept of valency, ionic and covalent bonding, bonding in metals, secondary bond forces, and so on have been discussed in a reasonable amount of detail.

A unique feature of the book is the adoption of a problem solving approach. Thus, while the text has been frequently interspersed with numerous worked out illustrative examples to help the concepts and theories, a large number of solved problems have been appended at the end of each chapter (totalling nearly 300).

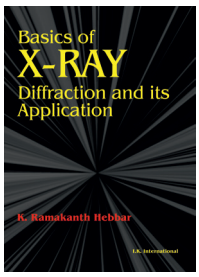
With its lucid style and in-depth coverage, the book would be immensely useful to undergraduate and postgraduate students of general chemistry and quantum chemistry. Students of physics and materials science would also find the book an invaluable supplement.

Contents:

Beginning of Quantum Theory/Atomic Spectra and the Bohr-Rutherford Atomic Model/Electronic Configuration of Atoms/Wave-Mechanical Approach/Wave-Mechanics of the Hydrogen Atom/Wave-mechanical Picture of Chemical Bonding/Valency, Ionic Bonds and Covalent Bonds/Bonding in Metals/Secondary Bond Forces/Index

Audience – Undergraduate and postgraduate students of general chemistry and quantum chemistry. Students of physics and materials science.

Basics of X-Ray Diffraction and its Applications



K. Ramakanth Hebbar

ISBN: 978-93-81141-54-0/Year 2007
Size: 16 cm × 24 cm/Pages 276
Paperback/₹ 395.00

Starting with the discovery of X-rays by Roentgen and the subsequent formalization of diffraction laws by Von Laue, Bragg and others, it covers the essential fundamentals of crystallography and the theory of X-ray generation and of the interaction of X-rays with matter. X-ray diffraction theory is covered in detail, serving as an excellent background to the following chapters the application procedures such as the laue, the rotating crystal and the powder techniques. Reciprocal lattice theory is introduced with the necessary vector algebra and the relationship between reciprocal lattice and diffraction, which the student has generally some difficulty in understanding inthe beginning, has been brought out elegantly. The chapters on film techniques are followed by one on the X-ray diffractometer and its applications.

Specific applications such as crystal structure determination, accurate determination of lattice parameters, single crystal studies, studies of crystallographic texture, stress measurement, orderdisorder transformation, phase diagram determination are covered in sufficient detail in the next chapters. There is a final chapter on the use of X-ray diffraction in chemical analysis.

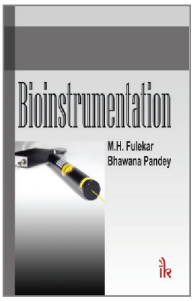
The list of topics covered is quite comprehensive. The treatment of topics in each chapter is sufficiently exhaustive for undergraduate and graduate courses in X-ray diffraction, not only for metallurgists and materials scientists/engineers, but also for other disciplines requiring the study of X-ray diffraction

Contents:

Introduction/Crystallography and Stereographic Projection/Generation and Nature of X-rays/X-ray Diffraction/Laue Techniques/Rotating Crystal Technique/Powder Techniques/X-ray Diffractometer/Determination of Crystal Structure and Lattice Parameter/Single Crystal Orientation/Nature of Polycrystalline Aggregates/Measurement of Stress/Order-Disorder Transformation/Phase Diagram Determination /Chemical Analysis/Reference Books/Index

Audience –Undergraduate and graduate courses in Metallurgy and Materials Science/engineers.

Bioinstrumentation



M.H Fulekar
Bhavana Pandey

ISBN: 978-93-82332-39-8/Year 2013
Size 18 cm × 24 cm/Pages 434
Paperback/₹ 545.00

The need of instrumentation in biological sciences began with the development of the telescope and the microscope by Galileo in the early 1600s. The invention of the compound microscope in 1610 gave birth to microscopic anatomy. In the 19th and early 20th century, microscopic anatomy opened up the areas of biological chemistry. The research in biology follows this by including more emphasis on process, quantification, problem solving, and "open-ended" laboratory activities. The measurement of physical, chemical and biological parameters using instruments in any living organisms is known as bioinstrumentation.

The realization of the present-day accomplishments in many disciplines has come out through the applications of inventions of modern scientific instruments. The modern scientific researches stand on two pillars, i.e., idea and technology. Ideas involve fresh insights, new concepts, and innovative approaches to scientific problems. Technology includes the development and use of complex scientific instruments and techniques. Ideas and technology are complementary and to a large extent, interdependent, most research projects in the physical, chemical and biological sciences depend upon the access to modern complex scientific instruments.

The present book deals with modern instruments and their applications in chemical biology, with special reference to:

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

- UV-VIS-FT-RI Spectroscopy, Fluorescence Spectroscopy, Flame Photometry, Atomic Absorption Spectroscopy
- Gas chromatography, High Pressure Liquid Chromatography, Thin Layer Chromatography
- Gas Chromatography, Mass Spectroscopy, Nuclear Magnetic Resonance, Bioreactor
- Gel Electrophoresis, PCR, Biosensor, Microscopy.

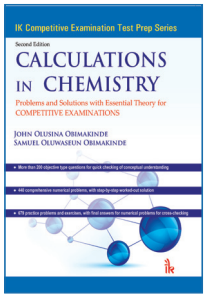
Bioinstrumentation will be useful as a textbook and/or reference book to undergraduate/postgraduate students, researchers, scientists, academicians, industrial personnel to understand basic principles, theory, components and functions, other related fundamentals and applications in physics, chemistry and biology.

Contents:

Instrumentation and its Application in Biology/Basic Terminology and conversion Formulas & Equations/UV-VIS Spectroscopy, Fourier Transform Infra-red/Fluorescence Spectrophotometry/pH Electrodes & Meter and pH Measurement/Digestion Apparatus/ Fame Photometer/Atomic Absorption Spectrophometer/Gas Chormatography/High Performance Liquid Chromatography/High Pressure Thin Layer Chromatography/Gas Chromatography-Mass Sepctrometry/NMR Spectroscopy/Bioreactor/Gel Electrophoresis/ Polymerase Chain Reaction/Biosensors/Microscopy.

Audience : B.Sc and M.Sc Students of Physics, Chemistry and Biology.

Calculations in Chemistry



John Olusina Obimakinde
Samuel Oluwaseun Obimakinde

ISBN: 978-93-82332-73-2/Year 2014
Size 18 cm × 24 cm/Pages 768
Paperback/₹ 795.00

Calculations in Chemistry is intended to help students overcome the challenges associated with solving the numerical problems in chemistry. Chemistry is a numerical science which cannot be fully appreciated without adequate numerical skills. In fact, the lack of problem-solving skills is one of the reasons for the poor performance of the students. Budgetary and size constraints often translate to lack of space for solving enough sample problems in core textbooks and most problems are presented in a difficult manner that douses enthusiasm for learning. Meant specifically for students studying chemistry at undergraduate and postgraduate levels, this book presents the calculations in chemistry in a simple, logical and down-to-earth manner that will impart students with the required numerical skills for excelling in chemistry.

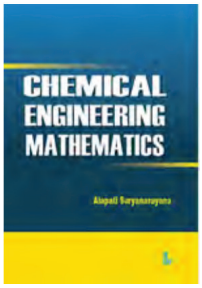
• wide topical coverage • clear, concise introductions that explain basic principles and theoretical basis for each type of calculation • numerous representative examples • practice problems and answers • end-of-chapter summary that gives a checklist of key terms and concepts • numerous exercises, including objective questions, with answers • exhaustive coverage of the mole concept • use of SI units and IUPAC conventions • comprehensive treatment of quantitative analysis • appendices that supply useful information

Contents:

Masses and formulae/Chemical reaction and stoichiometry/ Redox reactions and IUPAC nomenclature/Atomic structure and chemical bonding/The gaseous state/The solid and liquid states/ Properties of solutions/Quantitative analysis/Thermodynamics/ Electrochemistry/Chemical Equilibria/Acid-Base Equilibria/ Chemical Kinetics/Nuclear Chemistry

Audience – B.S.C. and M.S.C students.

Chemical Engineering Mathematics



Alapati Suryanarayana

ISBN: 978-93-90620-53-1/Year 2013
Size 18 cm × 24 cm/Pages 434
Paperback/₹ 595.00

This book covers the applications of Mathematics in Chemical Engineering and other fields. Theoretical part is summarized in the beginning of the chapters, so that the reader does not have to refer other books of Mathematics. The applications are covered step-by-step starting from easy ones to tough problems. All background and requisite materials are included for readers' convenience.

The various topics included are: Elementary problems, Formation of equations, Ordinary differential equations, Solutions by series methods, Partial differentiation, Partial differential equations, Numerical solutions, Statistical methods, Optimization problems, Laplace transforms and solutions, other mathematical methods.

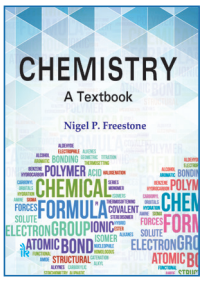
The book is useful for B.Tech (Chemical Engineering) students, pharmacy students and for practising engineers. In transport phenomena subject, sometimes the equations are not fully solved. In those cases, this book will be of immense help in seeing the solutions. In subjects like fluid mechanics, heat transfer and mass transfer, the contents of this book will be useful to understand the solutions.

Contents:

Introduction and Elementary Applications/Ordinary Differential Equations Solutions Applications Series Solutions/Partial Differentiation Equations Applications/Numerical Methods/Laplace Transforms, Its Applications/Optimization Methods/References/ Appendix/Index

Audience – B.Tech & B.E (Chemical Engineering) and Pharmacy students.

Chemistry : A Textbook



Nigel P. Freestone

ISBN: 978-93-86768-40-7/Year 2019
Size: 22 cm × 26 cm/Pages 144
Paperback/₹ 465.00

This book focuses on Fundamental chemistry concepts, from unlocking the vast amount of information contained within the periodic table and how atoms combine to form chemical bonds, to the different ways in which atoms and molecules interact.

Chemistry: A Textbook aims to provide the reader with the basic vocabulary and language through the understanding of the fundamental chemical principles and concepts.

Divided in six highly readable and understandable chapters, this book covers the fundamental concepts and principles of chemistry. Visual Information Boxes provide simple visual summaries of the text. Great emphasis is placed on acquiring the 150 words required to have a basic knowledge of chemistry. Vital Vocabulary is highlighted in bold and redefined in the Vital Vocabulary Builder found at the end of each chapter.

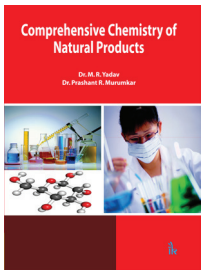
Contents:

The Chemical Alphabet/Chemical Bonding: Spelling & Naming Chemicals/The Grammar of Chemical Equations/Chemistry & Numbers/Reading the Periodic Table/Organic Chemistry/Index

Audience – Science graduates.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Comprehensive Chemistry of Natural Products



Dr. M. R. Yadav • Dr. Prashant R. Murumkar

ISBN: 978-93-90620-84-5/Year 2022
Size: 18 cm × 24 cm/Pages 780
Paperback/₹ 1095.00

Modern-day medicines have their origin from plants. Traditional use of various plant products by the local people paved the way for the discovery of wide ranging allopathic medicines. Efforts have been to cover comprehensively wide ranging topics on the chemistry of natural products in this book. The book has twenty chapters. Eighteen chapters are devoted to the chemistry and basics of primary and secondary metabolites obtained from natural sources. The initial five deal with importance of plant products, methods of their characterization and the way these products are biosynthesized by plants. One chapter is devoted to the importance of products of marine origin. Chapters six to seventeen deal with all the categories of natural products like carbohydrates, amino acids and proteins, nucleic acids, terpenoids, carotenoids, steroids, lipids and eicosanoids, phenolics, glycosides, alkaloids and vitamins. Latest developments like nutraceuticals, genes and genetic manipulations have been discussed at appropriate places in these chapters. The chapter on antibiotics throws light on the importance of metabolites obtained from microbes. One chapter is fully devoted to the details of some important medicinal plants of Indian origin.

The last two chapters on polynuclear aromatic hydrocarbons and heterocyclic compounds, though not exactly the part of curriculum of chemistry of natural products, but are essential to understand the chemistry of natural products. Considering the importance of chemistry of such compounds, these two chapters have been included in this book.

Special care has been taken to elaborate IUPAC nomenclature of certain chemical classes like steroids, eicosanoids, polycyclic aromatic compounds and heterocyclic compounds.

Undergraduate and postgraduate students of science and pharmacy would find the book very handy and useful in the study of their course on chemistry of heterocyclic chemistry.

Salient features

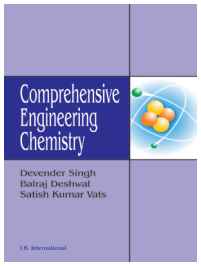
- Importance of the study of chemistry of natural products has been underlined by giving examples of natural products used as lead molecules for drug discovery and development.
- Biogenetic pathways are described schematically for majority of the secondary metabolites to give a bird's eye view to the readers of the biogenetic processes taking place in the plants

Contents:

Natural Products in Drug Discovery/Structure Elucidation Using Degradative and Synthetic Chemistry: The Classical Approach/Structure Elucidation Using Spectral Techniques: The Modern Approach/Natural Products from Marine Sources/Biogenesis of Secondary Metabolites/Carbohydrates/Amino Acids, Proteins and Proteomics/Nucleic Acids and DNA Manipulations/Lipids and Eicosanoids/Vitamins/Terpenoids, Iridoids and Quassinoids/Carotenoids and Nutraceuticals/Steroids/Phenolics, Pigments and Related Products/Glycosides/Alkaloids/Antibiotics/Some Important Indian Medicinal Plants/Polynuclear Aromatic Hydrocarbons/Heterocyclic Compounds/Index

Audience – UG & PG students of Pharmacy and Chemistry.

Comprehensive Engineering Chemistry



Devender Singh • Balraj Deshwal
Satish Kumar Vats

ISBN: 978-81-89866-55-6/Year 2008
Size 16 cm × 24 cm/Pages 368
Paperback/₹ 425.00

This book is designed to meet the requirement of the students of B.Tech and B.E. students.

The book discusses in detail the following topics: Thermodynamics, Phase Rule, Water and its Treatment, Corrosion and its Prevention, Lubrication and Lubricants, Polymer and Polymerization and Analytical Methods.

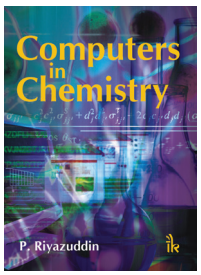
The book is suitably illustrated with diagrams and a number of solved numerical examples from different universities are included to make the text more exhaustive and understandable. Practical part is also appended at the end of the book.

Contents:

Thermodynamics/Phase Rule/Water and its Treatment: Part-I/Water and its Treatment: Part-II/Corrosion and its Prevention/Lubrication and Lubricants/Polymer and Polymerization/Analytical Methods/Experiments/Sample Papers/Index.

Audience – B.Tech and B.E. students.

Computers in Chemistry



P. Riyazuddin

ISBN: 978-93-80578-75-0/Year 2011
Size 18 cm × 24 cm/Pages 440
Paperback/₹ 405.00

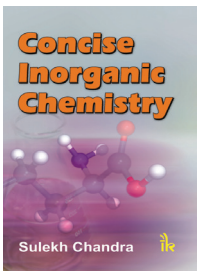
The book describes the fundamentals of computers to enable students to develop and write simple programs related to chemistry. An attempt has been made to trigger the interest of the students in the direct application potential of computers in the field of chemistry. The languages discussed are BASIC, FORTRAN and C. Beginning first with the language, the book describes control statements and gives a brief introduction to arrays, functions, sub-routines and sequence. Common examples and calculations in physical, organic and inorganic chemistry have been presented. More than 150 programs ranging from simple to complex, interesting exercises, hints and problems are some special features of the book.

Contents:

Computer Education in Chemistry/Personal Computers in Chemical Education/A Brief History of Computers/Understanding Computers/Computer Software/In Favour of BASIC/Getting Started/BASIC Commands/BASIC Functions/Algorithms, Flowcharts and Pseudocodes/Operators/Decisions and Branches/Subroutines/Repetitions/Loops/READ and DATA Statements/Arrays/BASIC Graphics Statements/Computer Errors and Accuracy/Programming Methods/Solubility and Solubility Product/Acid Base Equilibria/Solutions of Quadratic Equation/Total Entropy Change/Gas Laws/Kinetic Theory of Gases/Madelung Constant/Radioactive Decay/Calculation of pKA from pH-metric Titration Data/Location of End Points in Potentiotimetry/Simulated Titration Curves of Diprotic Acids/Further Iterative Methods/Numerical Integration/Spectrophotometry and System of Linear Equations/Statistical Evaluation of Experimental Data/Monte Carlo Methods I/Monte Carlo Methods II/Appendices/Bibliography/Index

Audience – UG & PG Students of Science and Chemistry.

Concise Inorganic Chemistry



Sulekh Chandra

ISBN: 978-93-80026-31-2/Year 2012
Size 16 cm × 24 cm/Pages 280
Paperback/₹ 355.00

This book is meant for the undergraduate and postgraduate courses. Each chapter has been provided with figures pertaining to the contents of the topic. Tabulated values, data etc., are also provided. Small questions along with their answers are put up in between

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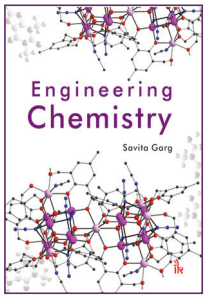
the topics to enable better understanding of each topic. Unsolved problems are appended at the end of each chapter. Point-wise discussion, properties, functions etc., of certain chemical compounds have been given. Chemical equations have been provided wherever required.

Contents:

Hard and soft acids and bases/Metal ligand binding in transition metal complexes/Magnetic properties of transition metal complex/ Electron spectra of transition metal complexes/Thermodynamic and kinetic aspects of metal complexes/Organometallic chemistry/ Bioinorganic chemistry/Silicons and Phosphazenes/Index

Audience – Undergraduate and postgraduate B.Sc. & M.Sc. students.

Engineering Chemistry



Savita Garg

ISBN: 978-93-86768-03-2/Year 2018
Size 18 cm × 24 cm/Pages 304
Paperback/₹ 395.00

Engineering Chemistry aims to impart intense and extensive knowledge of the subject, so that the readers understand the role of chemistry in the field of engineering. This book is meant for the engineering students. Every aspect of topics has been dealt with keeping its concern in engineering science. This book contains 9 chapters covering various disciplines of engineering chemistry and deals with various branches of chemistry such as physical, inorganic, organic and analytical. Other topics covered include electrode potential and cells, batteries and fuel cells, corrosion and its control, chemical fuel and photovoltaic cells, water and its treatment, nanomaterials, etc.

Salient Features:

- Topics explained and supported by examples.
- Simple, systematic and logical development of the subject with emphasis on the underlying fundamental concepts, principles and applications.
- Comprehensive question bank at the end of each chapter containing: Objective type questions (Classified into multiple – choice questions and fill in the blanks); Reviews Questions; and Exercise Questions.
- Large number of examples (in the body of the text as well as in solved examples) provides manifold opportunities to understand the topics.
- Incorporates thought stimulating exercises, latest examination questions and numerical problems.
- Safety concerns and precautions.

Contents:

Module – I: Electrochemistry/Battery Technology and Fuel cells

Module – II: Corrosion/Metal Finishing/Chemical Fuels/Solar Energy

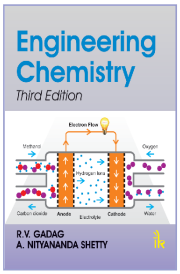
Module –IV: Polymer

Module – V: Water Technology/Nanomaterials

Audience – Undergraduate of all branches of engineering and technology, professionals and researchers

Engineering Chemistry

Third Edition



A. Nityananda Shetty
R.V. Gadag

ISBN: 978-93-84588-02-1/Year 2014
Size 18 cm × 24 cm/Pages 296
Paperback/₹ 365.00

Engineering Chemistry presents the subject with the aim of providing clear and sufficient understanding of chemistry to the students of engineering, as the same is imperative for any successful engineering. Some chapters in the book deal with the basic principles of chemistry while others are focused on its applied aspects, providing the correct interphase between the principles of chemistry and engineering.

Salient Features:

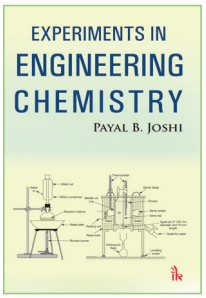
- Chapters cover both basic principles of chemistry as also its applied aspects.
- Written in easy self-explanatory language and in depth at the same time.
- Clear diagrams and solved numerical problems included wherever required.
- Review questions provided at the end of each chapter.
- A separate section 'Laboratory Manual' comprising 12 experiments is appended at the end of the book.

Contents:

Electrochemical Cells/Battery Technology/Corrosion and its Control/Metal Finishing/Fuels (Energy Sources)/Solar Energy/High Polymers/Water Treatment/Nanomaterials/Index

Audience – B.E. & B. Tech Students.

Experiments in Engineering Chemistry



Payal B. Joshi

ISBN: 978-93-85909-13-9/Year 2016
Size 16 cm × 24 cm/Pages 164
Paperback/₹ 315.00

The knowledge of chemical analysis, properties and behavior of different materials using various instrumental techniques are parts of engineering. This implies that engineers and technologists dealing with materials must have elementary training in chemistry so as to prepare themselves for the profession. This book presents laboratory experiments for the first year engineering students that can be adapted in almost all the chemistry laboratories across all the universities in the country. It will be a good reference resource for preparing students for chemistry practical examinations.

Practical experiments in this book have been prepared keeping in mind the major theory chapters in Engineering Chemistry. The book is designed as a teaching aid to help communicate simple chemistry experiments to students.

Salient Features:

This book will serve as a handbook to all B.E./B.Tech students to perform chemistry experiments.

- All the experiments are laboratory-tested and hence are reproducible.
- A resource for teachers planning to design novel experiments in the laboratory catering to the first year engineering students.
- Experiments provided in this book range from non-instrumental to specialized instrumental techniques.
- Novel experiments on polymers, nanomaterials and green chemistry are included. Special emphasis on the precautions to be taken while conducting the experiments is provided; use of cost-effective, lesser toxic chemicals and reagents is added for each experiment.
- Viva voce questions are presented covering all the experiments to help students prepare for the oral/practical examinations.

Contents:

Periodic Table of Elements/Common laboratory glassware and equipment/Safety in Chemistry Laboratory/1. Water Analysis/ 2. Polymer Analysis/3. Ore/Alloy Analysis/4. Electrochemistry/ 5. Energy Resources: Fuels, Lubricants/6. Preparation/Synthesis of Important Chemicals/7. Chemical Kinetics/8. pH-metry/

9. Polarimetry/10. Conductometry/11. Green Chemistry/12. Analysis of Food/Drug Samples/13. Miscellaneous Experiments/Annexure Viva Voce Questions.

Audience – Students of first year BE/B.Tech.

Fundamentals of Polymer Chemistry Principles, Methods, Properties and Applications

Forthcoming



Prof. Abhijit Bandyopadhyay
Srijoni Sengupta • Sayan Basak

ISBN: 978-93-90620-26-5/2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

Polymer Chemistry is a subdiscipline of chemistry that focuses on the chemical synthesis, structure and chemical and physical properties of polymers and macromolecules. The principles and methods used in polymer chemistry are also applicable through a wide range of other subdisciplines like Organic Chemistry, Analytical Chemistry and Physical Chemistry.

Polymer Chemistry can also be included in broader fields of Polymer science or even nanotechnology, both of which can be described as encompassing polymer physics and polymer engineering.

This book provides a comprehensive introduction and circumscribes the recent development in the realm of polymer science in a multi-mode model. The book emphasizes both theoretical perspectives along with examples to make readers understand the subject in depth alongside also presents subjective, objective-cum-numerical problems enabling students to prepare for various competitive examinations.

Salient Features:

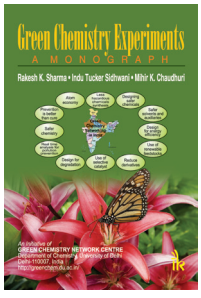
- Introduces polymer science to both graduate-level students.
- Features the recent developments in the realm of the polymer industry, thereby giving a comprehensive overview of the subject both from an academic and industrial perspective.
- The numericals along with the subjective and the objective questions give the students a holistic perspective to understand Polymer Science.
- Several examples and case studies are given, making the students easier to relate to the theoretical knowledge.

Contents:

Introduction to Macromolecular Science/Molecular Weight Distribution of Polymers/Step Growth Polymerization/Chain Growth Polymerization/Controlled Polymerization/Introduction to the Copolymerization/Sterioregular Polymerization/Conformation of the Polymer Chain/Polymer Solutions: Fundamentals, Thermodynamics and Dynamics/Linear Viscoelasticity/The Glass Transition Temperature and the Melting Temperature/Polymer Characterisation/Index

Audience: B.Sc and B.Tech students.

Green Chemistry Experiments



Rakesh K. Sharma
Indu Tucker Sidhwani
Mihir K. Chaudhuri

ISBN: 978-93-81141-55-7/Year 2013
Size 18 cm × 24 cm/Pages 106
Paperback/₹ 345.00

Green Chemistry Network Centre (GCNC) has been established in Delhi University under the recommendation of a panel of world leaders headed by Professor Paul Anastas (known as Father of Green Chemistry) with the following aims:

- **Build up a network for exchange of expertise, discussion and knowledge** between industrialists and academicians as well as between chemists and engineers with interests and expertise relevant to Green Chemistry.
- **Prepare and disseminate the educational materials on Green Chemistry** for school, college and university levels through specially designed courses (e.g. add-on courses) with special focus on laboratory experiments.
- **Design training** not just to expose the chemists to the concepts, principles and methodologies of Green Chemistry but also to empower them to bring this new knowledge back to their institution or industries.
- **Translate existing Green Chemistry materials** for broader distribution through the network all over India.

GCNC received the prestigious ChemRAWN XIV-GCI Developing and Emerging Nations Grant Award, consecutively for the year 2005, 2006 & 2007 from American Chemical Society's Green Chemistry Institute for these activities.

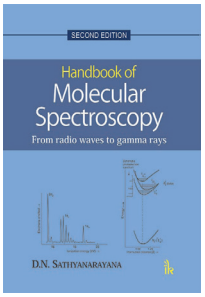
Contents:

Solvent-Free and One Pot Synthesis of Phthalocyanine Complex of Copper (II)/Solvent-Free Aldol Condensation between 3,4-dimethoxybenzaldehyde and 1- indanone/Quantitative Solid-Solid Synthesis of Azomethines/Solvent -Free Synthesis and Characterization of 5,10,15,20-mesotetraphenylporphyrin/Benzoin Condensation Using Thiamine as a Catalyst Instead of Cyanide/Clean Oxidation of Benzoin to Benzil on Zeolite A without any oxidizing agent under Solvent-Free Condition/Preparation of Benzilic Acid from Benzil/Experimental Demonstration of Phase Diagram of Carbon Dioxide using Dry Ice/Extraction of D-Limonene from Orange Peel using Liquid Carbon Dioxide as a solvent/Preparation and Evaluation of Biodiesel from Vegetable Oil/The Preparation and Characterization of 1-Acetylferrocene/Preparation of Bis(acetylacetonato) copper (II)/Preparation of Tris(acetylacetonato)iron(III)/ Preparation of Tris(acetylacetonato) manganese(III)/Synthesis of Tetrabutylammonium tribromide (TBATB): A Green Reagent and its Application/Greener Alternative to Qualitative Analysis for Cations without H2S and other Sulfur containing Compounds/Preparation and Characterization of Green and Blue Luminescent Isomers of Tris(8-Hydroxyquinolinato) aluminium (III) Complex/Molecular Modeling of Isomers of Tris (8-Hydroxyquinolinato) aluminium (III) Complex/Preparation of Gold Nanoparticles using Tea

Audience – B.Sc. and M.Sc.

Handbook of Molecular Spectroscopy

Student's edition



D.N. Sathyanarayana

ISBN: 978-93-86768-23-0/Year 2019
Size 18cm × 24 cm/Pages 650
Paperback/₹ 795.00

Handbook of Molecular spectroscopy: Student's edition provides comprehensive coverage of underlying principles and applications of major modern spectroscopic techniques spanning from microwave spectroscopy, infrared and Raman, electronic spectroscopy of atoms and molecules, luminescence, photoelectron and chiroptical spectroscopy. Previous edition, Handbook of Molecular spectroscopy provided a straightforward introduction to the spectroscopy of polyatomic inorganic and organic molecules while in this the subsequent chapters deal with magnetic resonance (NMR, ESR, and NQR), Mossbauer and X-ray absorption spectroscopy. Also included is a new chapter on widely applicable molecular mass spectrometry. A wide range of worked examples in the text are used to describe how spectra arise and what information on the identity and structure of a material can be derived.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Salient Features

- Applications to both organic and inorganic based systems
- Emphasis on the interpretation of spectra for applications
- 400 chapter-end solved problems
- Over 360 illustrations to aid conceptual understanding
- Rudimentary group theory, an essential skill for tackling problems in bonding and spectroscopy.
- Six appendices.

Contents:

General Introduction/Molecular Symmetry/Rotational Spectroscopy/Infrared Spectroscopy/Raman Spectroscopy/Electronic Spectroscopy/Optical Rotatory Dispersion and Circular Dichroism/Fluorescence Spectroscopy/Photoelectron Spectroscopy/Nuclear Magnetic Resonance/Electron Spin Resonance/Nuclear Quadrupole Resonance/Mössbauer Spectroscopy/X-Ray Absorption Spectroscopy/Molecular Mass Spectrometry/Appendix I: Values of Fundamental Constants/Appendix II: Point Group Character Tables /Appendix III: Tanabe-Sugano Diagrams/Appendix IV: 10 Dq and B from Tanabe-Sugano Diagram

Audience – Postgraduates of Physical science students, scholars, researchers.

Innovative Approach to Physicochemical Analysis



Dr. Christine Jeyaseelan
Dr. Ravin M. Jugade

ISBN: 978-93-84588-95-3/Year 2020
Size: 18 cm × 24 cm/Pages 684
Paperback/₹ 1995.00

Innovative Approach to Physicochemical Analysis deals with substantial and conceptual explanations of physicochemical systems, stability, propertiesand applicability in relevant areas. It tracks and focuses frontiers of molecular interactions and their potential interfaces that are highly applicable in academics and various industries like chemicalsciences, pharmaceuticals, biotechnology, biochemical engineering, nanosciences, biophysics, drug binding and release systems, cosmetics, agrochemical, rheology of food and nutrition, and critical solvents via interaction engineering.

Fundamentally, this book establishes an operational link between'formulation of liquid mixtures and molecular interaction engineering through the physicochemical properties (PCPs)' as a physicochemical technology of material sciences, depicted as physmatology. This link leads to developing a new thrust area of current research due to its emergence as an interdisciplinary subject for multidisciplinary applications in understanding foundational theories of molecular dynamics in varieties of liquid mixtures.

Salient Features:

- With its coverage and treatment, this is one of the most authoritative and exhaustive treatises in the field of physicochemical properties of liquid mixtures.
- The core focus of the book is around liquid mixtures, their nature, components, and behavior demonstrated with various theories like surface tension, entropy, friccohesity, etc., and devices like the Survismeter.
- The book concludes with a rich question bank for the readers to test their knowledge and level of understanding.

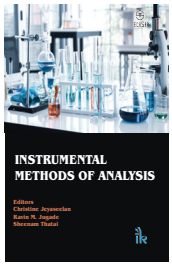
Contents:

Introduction/New Initiatives and Understanding of Liquid Models/Structural Components and Foundations of PhysicochemicalProperties/Structural Initiations for Originating Physicochemical State/Multiphysicochemical Parameters Measuring Device: Survismeter/Friccohesity: A Way of Structural Treatment/ Thermodynamics Profile of Emulsions or Nanoemulsions/Virtual Concepts about Plate Theory of Laminar Flow/Foundation and Conceptualization of Green Laboratory/Friccohesity in Everyday Life: A Critical Concept to Work With/Basic Understanding of Green Physicochemical Approaches/Developing Hypothesis/Neo-London DispersiveForces:PairwiseInteraction/ThermodynamicsApplications in Nanotechnology/Law of Structure and Activity Relationship/ Wetting Economy: Saving of Pesticides and Preventing Pollution/ Molecular Motions, the Fundamental Factors Affecting Friccohesity/ Multiphysicochemical Parameters Measuring Device: Survismeter/ Emulsion Polymerization/Fundamental Understanding of Emulsions and Their Formulation/Theories of Emulsification/Thermodynamics of Lyophobic Colloids and Surface Cohesive Energy /Understanding Dynamics of Molecules via Queries/Electrodynamic Shock Vibrator/ Determination of van der Waals Forces and Friccohesity/Friccohesity and Nanoparticles/Science of Partial Molar Volumes/How to Measure Partial Molar Volumes/Process of Solution's Coordinates/ Friccohesity of Particle Distribution in Mixture/Molecular Stretching and Entropy/Scientist and State of New Art/Thermodynamics as Natural Science/Physicochemical Indicators (PCIs)/Appendices/ Understanding Hypothesis and Science of Survismeter via Questions/ Creative and Innovative Questions /Questions for Advanced Understanding/Questions Relating to Thermodynamic Treatment of Liquid Mixtures/Macromolecule Related Questions/Innovative Questions on Physicochemical Sciences/Index

Audience: Researchers and scientists in chemical sciences, food technology, nano and solution chemistry, solvent synthesis.

Instrumental Method of Analysis

New



Dr. Christine Jeyaseelan
Dr. Ravin M. Jugade

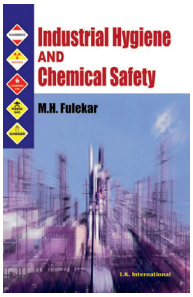
ISBN: 978-93-90620-88-3/Year 2023
Size: 18 cm × 24 cm/Pages 376
Paperback/₹ 545.00

Instrumentation Techniques refer to the development of methods and tools used in applied physics, materials science and nanotechnology for design, synthesis, manufacturing, imaging or analyticsfor analytical chemists in special and all the material scientists in general. They form a basis for qualitative description of as well as quantitative estimation of various types of materials, samples, reaction intermediates and final products. The fundamental principles underlying these techniques, instrumentation involved in it, applications for routine analysis and current status of these techniques in research field have been covered in each chapter. The authors have taken all the efforts to make the language and topics simple to understand for the UG as well as PG students.

Salient Features:

- Details of all the instrumental methods of analysis.
- Precise description about principles, instrumentation and application of each technique.
- List of questions at the end of each chapter classified as: Long answer, short answer, very short answer and numericals.

Industrial Hygiene and Chemical Safety



M.H. Fulekar

ISBN: 978-81-888237-92-0/Year 2006
Size 16 cm × 24 cm/Pages 264
Paperback /₹ 365.00

(See on page 141)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

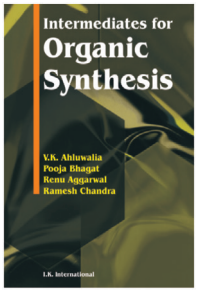
Contents:

Introduction to Spectroscopy/Rotational Spectroscopy/Microwave Spectroscopy/Raman Spectroscopy/Ultraviolet Spectroscopy/Vibrational Spectroscopy/InfraRed Spectroscopy/Chromatography/Mass Spectrometry/Atomic Absorption Spectroscopy/NMR Spectroscopy/Electroanalytical Methods/Radiation and Radiochemical Methods of Analysis/X-ray Analysis and Electron Microscopy/Index

Audience: B.Sc and M.Sc students of Chemistry

Shelving – Chemistry

Intermediates for Organic Synthesis



V.K. Ahluwalia • Pooja Bhagat
Renu Aggarwal • Ramesh Chandra

ISBN: 978-81-88237-33-3/Year 2005
Size 16 cm × 24 cm/Pages 376
Paperback/₹ 495.00

The intermediates described in this book include different types of phenols, aldehydes, carboxylic acids and ketones. The preparation of heterocyclic compounds (O-containing, S-containing, N-containing, N & S-containing) is also described. The synthesis of certain miscellaneous compounds of the type benzyl cyanides, b-ketoesters, chalcones, naphthaquinones, benzoquinones, stilbene and certain catalysts and reagents required for organic synthesis are also described.

The book aims to make available detailed procedures for the synthesis of various intermediates, which are generally required by organic chemists working in various universities, industries and by the research scholars at different levels. An attempt has been made to describe the best possible procedures with ample experimental details keeping in mind the maximum yield. The authors have verified all the procedures described.

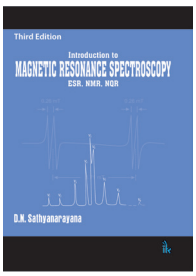
Contents:

Phenols/Aldehydes/Carboxylic Acids/Ketones/Heterocyclic Compounds/Miscellaneous Compounds/Index.

Audience – B.Sc. (Gen./Hons.) and M.Sc. students.

Introduction to Magnetic Resonance Spectroscopy ESR, NMR, NQR

Third Edition



D.N. Sathyanarayana

ISBN: 978-93-86768-92-6/Year 2014
Size 18 cm × 24 cm/Pages 464
Hardback/₹ 995.00

This book brings together the three branches of magnetic resonance spectroscopy namely, electron spin resonance (ESR), nuclear magnetic resonance (NMR) and nuclear quadrupole resonance (NQR) and presents a coherent and progressive coverage of the subject in a simple and lucid style. Each part covers the physical basis of a related spectroscopic method and its chemical applications. The emphasis is on obtaining and interpreting some types of spectra often met in the laboratory that can be applied in solving problems related to structure and behaviour of organic and inorganic molecules. Each part concludes with references to advanced literature and exercises that test the readers' understanding. This text may be used for self study.

The text will benefit postgraduate students at M.Sc., M.Phil. and research in Chemistry, Physics, Biology and Pharmacology.

Salient Features:

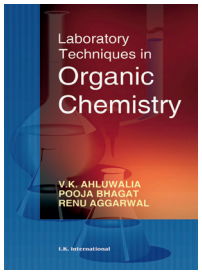
- Use of Huckel and crystal field theory as tools in the interpretation of spectra.
- Extended coverage of 2D NMR spectra.
- NMR of nuclei such as 13C, 19F and 31P.
- Non-mathematical description of the experiments.
- Develops the foundation in a clear step-by-step manner.
- End of chapter exercises.

Contents:

General Introduction/**PART-1:** Electron Spin Resonance/Basic theory/Hyperfine structure/Experimental Aspects: ESR/Spectral Characteristics: Line Width and Anisotropy/Dynamic Processes/The Triplet State/Transition Metal Complexes/Double Resonance Techniques/**PART-2:** Nuclear Magnetic Resonance/General Principles/Chemical Shift/Spine-Spin Coupling/Experimental Aspects: NMR/Dynamic NMR Spectroscopy/Spectra of Other Nuclei: 13C, 19F and 31P/16. Relaxation Processes/Multiple Resonance Techniques/Selected Topics/Two-Dimensional NMR Spectroscopy/PART-3: Nuclear Quadrupole Resonance/Nuclear Quadrupole Resonance Spectroscopy/Appendix General Data and Fundamental Constants/Index

Audience – M.Sc., M.Phil. and research students in Chemistry, Physics, Biology and Pharmacology.

Laboratory Techniques in Organic Chemistry



V.K. Ahluwalia • Pooja Bhagat
Renu Aggarwal

ISBN: 978-81-88237-32-6/Year 2005
Size 16 cm × 24 cm/Pages 208
Paperback/₹ 345.00

This book deals with general information about work in Organic Chemistry Laboratory, viz., safety, first aid, different types of apparatus and their assemblies used for various types of reactions, stirring arrangements, heating techniques and low temperature experiments.

Various methods used for purification of organic compounds have been described. Besides the normal technique, the book includes write-up about molecular distillation, chromatography and electrophoresis.

Special emphasis has been given to the methods, which can be used for working up of organic reactions. Various methods, which can be used successfully for isolation of products from natural sources, have been incorporated. Emphasis has also been given on the isolation of products from oily mixture using the technique of liquid-liquid extraction.

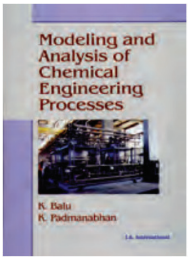
Methods for determining the criteria of purity of organic compounds have been discussed. The book also deals with drying and purification of solvents, preparation of spectroscopical grade solvents and HPLC solvents. The preparation of commonly used deuterated solvents (which are used for NMR spectroscopy work) is a special feature of this book.

Contents:

General Information/Purification of Organic Compounds/Isolation (or Extraction) of Products from Reaction Mixture/Natural Sources/Criteria of Purity/Solvents/Reagents/Bibliography.

Audience – B.Sc. (Gen./Hons.) and M.Sc. students.

Modeling and Analysis of Chemical Engineering Processes



K. Balu • K. Padmanabhan

ISBN: 978-81-89866-31-0/Year 2017
Size 18 cm × 24 cm/Pages 398
Paperback/₹ 475.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

The book is in two parts. The first part discusses the methods of modeling chemical engineering rocesses through well known mathematical methods involving numerical calculations. This includes the recent concepts of Fuzzy logic and neural nets. The second part describes the efficient optimization methods, which are available for the effective application in many chemical processes.

This involves methods of search for extrema as well as optimization, with and without constraint relations Most books on nonlinear programming are of theoretical type, and the exact procedures of computation are often obscure. But in this book, a number of problems have been worked out. In addition to this, computer programs are included for almost all the topics.

Due to the intricacy of optimization programs, the flow charts and the program in clear BASIC language have been provided so that the reader can understand the mathematical methods.

The book will be useful for students and practising engineers in the field of chemical engineering, biotechnology, environmental engineering, and applied mathematics.

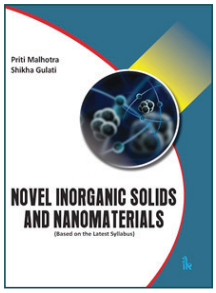
Contents:

Part I: Modeling Through Algebraic, Differential and Partial/ Differential Equations/Transform Techniques/Mathematical Aspects of the Basis of Optimization Methods/Large Systems nalysisMethods/ Index.

Part II: Extrema of Functions and Search Methods/Methods of Numerical Optimization/Some Additional Methods for Optimisation & Constrained Optimisation/Index.

Audience – Students of Chemical Engineering, Biotechnology, Environmental Engineering and Applied Mathematics

Novel Inorganic Solids and Nanomaterials



Priti Malhotra • Shikha Gulati

ISBN: 978-93-90620-95-1/Year 2022
Size 18 cm × 24 cm/Pages 432
Paperback/₹ 545.00

This book focuses on Material Sciences and encompasses inorganic solids and nanomaterials. It covers the new syllabi prescribed by UGC & University of Delhi under the New Education Policy (NEP) for B.Sc. (Honours) and B.Sc. (Programme) courses.

This book is organized in fifteen chapters that provide the theoretical aspects of each topic along with their practical facets. The topics include introduction to inorganic solids, synthesis and modification methodologies of inorganic solids, inorganic solids of technological importance, nanomaterials, nanobiomaterials, characterization techniques, molecular materials, composite materials, ion exchange resins and speciality chemicals/polymers.

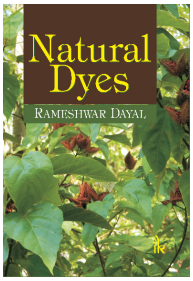
The last chapter includes laboratory experiments, to enhance perception of the topic. Some important questions related to the experiments for viva voce are provided at the end of each experiment. In every experiment teachers' notes, not given in any book, are given at the end which will be helpful for teachers. Hence, this book not only provides education to the students but also serves as a reference book for the teachers and industrial chemists. The question bank is also compiled at the end of each chapter.

Contents:

Introduction to Solids and their Synthesis Strategies/Solid Electrolytes: Superionic Conductors/Molecular Materials/Inorganic Pigments/ Composite Materials/Speciality polymers: Conducting polymers/ Ion Exchange Resins/Ceramics & Refractories/Nanomaterials: An Overview/Characterization Techniques of Nanomaterials/Advanced and Modified Nanomaterials/Nanotechnology in Biological Sciences: Nano-Biomaterials/Nanotechnology in the Biomedical field/Benefits and Environmental Risks of Nanomaterials/Laboratory Experiments/ Index

Audience – B.Sc (Hons.) and B.Sc (General).
Shelving – Chemistry.

Natural Dyes



Dr. Rameshwar Dayal

ISBN: 978-93-84588-15-1/Year 2015
Size 18 cm × 24 cm/Pages 376
Hardback/₹ 3995.00

Natural dyes were exclusively used for colouring till the middle of nineteenth century. But, due to accidental discovery of first synthetic dye mauveine by W.H. Perkin in 1856, and a number of other synthetic dyes in latter part of nineteenth century, their use reduced considerably by the beginning of twentieth century. It was realized during the last decade of 20th century, that synthesis of dyes using aromatic chemicals and their subsequent use cause harmful effects to the environment. Also, the use of textiles dyed using azo dyes which released twenty-two aromatic amines caused harmful effects to the people. The safest may be the use of natural dyes which are produced in the nature's laboratory. Thus, there is renewed interest for the revival of natural dyes during the last two decades.

This book consists of nine chapters each describing the different aspects of natural dyes. The first chapter gives concise description about the forests and the goods and services provided by them. Natural dye is an important forest produce and used by people since time immemorial. The second chapter gives a brief description about the history of natural dyes while their classification is described in the third chapter. An exhaustive list of the dye yielding plant species along with the two versatile dyes, namely, lac, indigo and herbal colours have been described in the fourth chapter. Chapter five deals with the chemistry of natural dyes while the mordants used for fixing the dyes have been given in chapter six. Dyeing methods have been described in chapter seven, determination of the colourfastness properties of the dyed samples and colour measurement in the eighth chapter, and theory of dyeing in the ninth chapter. Plants are the greatest organic chemist on the earth, and in the nature's laboratory, carry out complex organic synthesis with ease to manufacture complicated chemical compounds with amazing degree of accuracy, structures and characteristics. Numerous compounds of plants containing different functional groups and unsauration are coloured and can be used as dyes either alone or in combination with other chemical constituents.

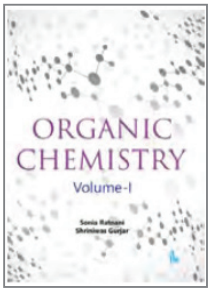
This book provides a simple, concise and collective description about the various aspects of natural dyes. It will be useful to the academicians, scientists, industrialists, researchers, students and people interested to know about the use of natural dyes, and contribute to environment protection.

Contents:

Introduction/History of natural dyes/Classifi cation of natural dyes/ Sources of natural dyes/Chemistry of natural dyes/Mordants/ Methods of dyeing/Determination of colourfastness/Theory of dyeing/Index

Audience – UG & PG Students in Chemistry

Organic Chemistry



Sonia Ratnani
Shriniwas Gurjar

ISBN: 978-93-86768-58-2/Year 2007
Size 18 cm × 25 cm/Pages 516
Hardback/₹ 745.00

Organic Chemistry provides fundamentals of organic chemistry. It is meant for undergraduate students having chemistry as

one of the major subject. i.e., B.Sc (H) Chemistry, B.Sc Life Sciences, B.Sc (Physical Sciences). In organic chemistry we study a huge number of molecules whose role is best described by their formulas and structures comprising atoms, bonds, electrons, charges, etc. Thus, the challenge lies how their action is explained on paper. Hence, an initiation is brought through this book which includes the fundamentals of organic chemistry such as what is organic chemistry, structure and bonding, organic reaction mechanism, stereochemistry, aliphatic hydrocarbons and concept of aromaticity. The core content is presented with the proposed mechanisms and solving problems.

The book fulfils the requirements of CBCS syllabus initiated since last a few years in Delhi University and other universities. This book will also serve as a reference book for competitive examination and entrance examinations such as Master's DU, IIT-JAM, NET-GATE, TIFR, IISc, etc., as advanced knowledge of the essential topics is also encapsulated.

Salient Features:

- Detailed concepts from the scratch to the higher level with the help of solved problems wherever applicable.
- Content equipped with diagrammatic representations, highlighted mechanisms, bulleted information and tables to introduce and reinforce the special topics.
- Emphasis on learning the concepts through problems and solutions.
- Loaded with solved problems at basic and advanced levels.
- Focus on reasoning rather than memorization.
- Additional Multiple Choice questions for competitive examinations.

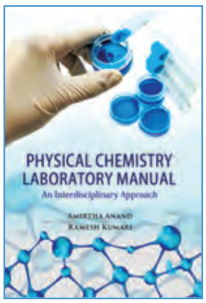
Contents:

Classification and Nomenclature of Organic Compounds/Structure and Bonding/Reaction Mechanism/Stereo Isomerism/Alkanes/Conformational Stereoisomerism in Alkanes and Cycloalkanes/Alkenes (Unsaturated Hydrocarbons)/Alkynes/Aromatic Hydrocarbons/Index.

Audience – B.Sc (H) Chemistry, B.Sc Life Sciences, B.Sc (Physical Sciences

Physical Chemistry Laboratory Manual

An Interdisciplinary Approach



Amirtha Anand
Ramesh Kumari

ISBN: 978-93-86768-15-5/Year 2018
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 395.00

This book covers the latest syllabus of CBCS pattern of Delhi and other universities for both B.Sc., Programme and Honours courses. A large number of Physical Chemistry, Environmental Chemistry, Nanoscience, Polymer Chemistry and Analytical Chemistry experiments have been covered using interdisciplinary and innovative methods. The contents include some fundamental chemical concepts, measurement of surface tension and viscosity, colorimetry, determination of order of a reaction, hetrogeneous equilibria, adsorption on solid surfaces, thermochemical measurements, conductometric and potentiometric measurements, pH metry, environmental parameter analysis, etc. Wherever possible, two or more methods are given. So the teachers and students will have a choice to make depending on the availability of chemicals, apparatus, instruments, time, etc. This book will give them the opportunity to relate theory and practicals for a better understanding of the subject.

Contents:

Introduction/Surface Tension Measurement/Viscosity Measurement/pH Measurement/Thermochemical Measurement/Heterogeneous Equilibria/Potentiometric Measurement/Conductometric Measurement/Chemical Kinetics/Colorimetric and Spectrophotometric Measurements/Adsorption and Distribution Measurements/Environmental Parameter Measurement/Miscellaneous Experiments/Programming with Basic Language/Appendices/Bibliography/Index

Audience – B.Sc. General and Hons. student

Shelving – Chemistry

Practical Organic Chemistry

Volume–I



Sharda Pasricha
Ankita Chaudhary

ISBN: 978-93-90620-20-3/Year 2022
Size 18 cm × 24 cm/Pages 310
Paperback/₹ 495.00

This book is intended to provide guidance to undergraduate students on the essential experimental techniques used in a typical undergraduate lab. This knowledge will not only help them to perform experimental work but will also help them extend their knowledge to face greater challenges during their postgraduate classes as well as in project-based research.

Salient Features:

- Written in two parts, the first part is devoted to the basic concepts of safety, instrumentation, apparatus, techniques for purification and separation of organic compounds. The second part is devoted to preparatory methods for synthesis of organic compounds.
- Some new green preparations which are now available have been included wherever the information was available.
- Gives in-depth visual description of the safety methods, experimental setup, apparatus setup and end products obtained in the preparations wherever required.
- The background of the reaction, safety considerations for handling of reagents, chemicals and products, concepts learnt from the experiments and utility of the exercise have been given special attention
- A special note of the things to remember while performing the experiments, based on the experience of the authors, has been included especially for the benefit of the students.

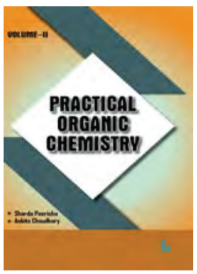
Contents:

Part I: Safety Considerations, Commonly Used Laboratory Equipment, Glassware and Common Laboratory Techniques Safety Considerations in a Chemistry Laboratory/Commonly Used Laboratory Equipment and Glassware/Common Laboratory Techniques for Purification and Separation/Criterion for Purity/Selected Experiments Based on the Concepts learnt so far Part II: Small Scale Preparations Small Scale Preparations for an Undergraduate Organic Chemistry Laboratory/Appendix I/Bibliography/Index

Audience – B.Sc students

Practical Organic Chemistry

Volume–II



Sharda Pasricha
Ankita Chaudhary

ISBN: 978-93-90620-22-7/Year 2022
Size 18 cm × 24 cm/Pages 288
Paperback/₹ 395.00

This book is written in four chapters focusing on quantitative estimation, isolation, biochemical estimations and identification of nknown organic compounds respectively. This along with the topics handled in the first volume will equip the students with all the necessary acumen required to handle challenges in the undergraduate, postgraduate as well as the research labs.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Salient Features:

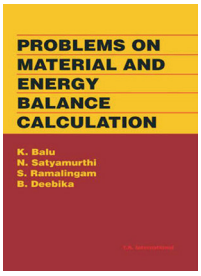
- Methods of estimation, extraction and isolation of organic compounds and important biomolecules is discussed.
- The background of the experiment, concepts learnt from the experiments, utility of the exercise have been given special attention.
- A systematic scheme and a detailed description of the steps involved in establishing the structure of an unknown compound through qualitative analysis has been discussed.
- A brief idea of how IR and NMR spectroscopy data can be used to augment the knowledge obtained from chemical methods is given.
- Green chemistry approach of using spot tests and greener alternatives have been discussed wherever possible.
- Disposal strategies wherever available have been given in chapter 4.
- A special note of the things to remember while performing experiments, based on the experience of the authors in undergraduate classes, has been included.

Contents:

Quantitative Estimation/Extraction from Natural/Commercial samples/Biochemical Estimation/Qualitative Analysis/Appendix I: Classified Table of Organic Compounds/Appendix II: Reagent preparations/Appendix III: Common Buffers Used in the Laboratory/Bibliography/Index

Audience – B.Sc students

Problems on Material and Energy Balance Calculation



K. Balu • N. Satyamurthi
S. Ramalingam • B. Deebika

ISBN: 978-93-80026-04-6/Year 2018
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 515.00

The present book has problems and solutions in Material and Energy Balance in Process Equipment. This is followed by Energy Balance problems. All problems assume Steady-State system. The text covers the syllabus of all Chemical Engineering institutes offering this course.

The number and variety of problems proposed in this book are extensive. The problems are organized in each chapter according to the subject matter. It is possible for answers to differ slightly due to different sources of data. The teaching experience of authors convinces that one of the glaring weaknesses of the students in Chemical and Petroleum Engineering is their inability to think clearly and accurately in terms of arithmetic. It is hoped that this book will prove of real value in Process Calculations Instructions in classroom. This can also serve as a refresher book for practising engineers.

Contents:

Methods of Expressing Compositions of Mixtures and Solutions/Gas Calculations/Material Balances/Recycle and Bypassing Operations/Humidity and Saturation/Fuels and Combustion/Problems in Sulphur and Sulphur Compounds Burning Operation/Thermophysics/Index.

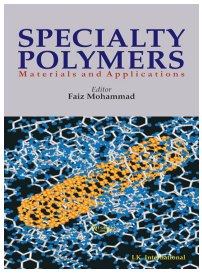
Audience – Chemical Engineering courses.

Specialty Polymers

Materials and Applications

Editors

Faiz Mohammad



ISBN: 978-81-88237-65-4/Year 2007
Size 18 cm × 25 cm/Pages 608
Hardback/₹ 2995.00

This book thoroughly covers today's rapidly growing topics on the specialty polymers and their applications in most sophisticated and specialized areas. It gives up-to-date in-depth knowledge and extremely comprehensive details of the chemistry, physics, material science, technology and device applications of specialty polymers.

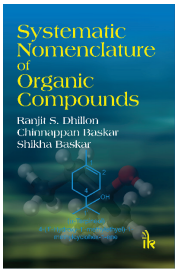
This comprehensive book containing 16 state-of-art-review chapters is the result of the untiring efforts of 35 highly renowned experts from the national and international scientific community. It is thought provoking to the researchers who are working in the fields of chemistry, biochemistry, biotechnology, medicine, polymer chemistry, semiconductor physics, material science, electrochemistry, biology, electronics, photonics, solid state physics, nanotechnology, electrical and electronics engineering, optical engineering, device engineering, data storage and other related areas.

Contents:

Liquid Crystal Conducting Polymers/Polyanilines: Materials and Applications/Polymer Nanofibers: Fabrication, Applications and Characterization/Magnetic Polymer Microspheres/Intrinsically Conducting Polymers for Metallic Corrosion Protection/Inorganic Polymers for Advanced Applications/Light Weight Polymer Composite Materials for Automotive Industry/Conducting Polymer-Based Sensors/Photo-Converters Based on Dye-Doped Polymers/Polymers in Medicine/Luminescent Polymers/Polymers in Electronics/Ion Conducting Polymers/Specialty Coatings and Adhesives/Recombinant Polypeptides in Therapeutics/Electrically Conducting Polymer Composites/Index.

Audience – Chemistry, Chemical & Polymer Engineering and Materials Science students and researchers.

Systematic Nomenclature of Organic Compounds



Ranjit S. Dhillon
Chinnappan Baskar
Shikha Baskar

ISBN: 978-93-84588-28-1/Year 2015
Size 16 cm × 24 cm/Pages 128
Paperback/₹ 375.00

Systematic Nomenclature of Organic Compounds aids chemical communication through the presentation of methods and their use in forming reasonable, acceptable, and unambiguous names for organic compounds. It describes in a common language so that the nomenclature is made useful and understandable for both undergraduate and graduate students. A diagrammatic presentation is given to create interest in the topic along with a comparison of different nomenclature operations for some compounds with some typical structures. A number of examples are discussed in a systematic step-by-step approach.

This book provides in-depth information of nomenclature of organic compounds. It contains 14 chapters covering all aspects of nomenclature which include Main Principles, Classification, IUPAC Nomenclature of Hydrocarbons, Nomenclature of compounds with two different functional groups, Aromatic Hydrocarbons, Fused Polycylic Aromatic and Unsaturated Hydrocarbon, Carbocyclic Compounds, Heterocyclic Compounds, Bridged Systems, Spiro Hydrocarbons, Terpenoids, Steroids, Macrocyclic Compounds, and Stereochemical notations.

The book is meant for the students at undergraduate and postgraduate level and will be equally useful for instructors, researchers, and industrial scientists in the areas of organic chemistry, general chemistry, biochemistry, pharmaceutical chemistry, and industrial chemistry.

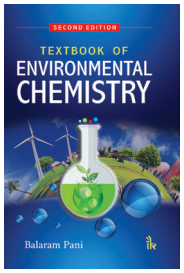
Contents:

Main principles/Classification/IUPAC nomenclature of hydrocarbons and functionalized compounds/Nomenclature of bifunctionalized compounds/Aromatic hydrocarbons/Fused polycylic aromatic and

unsaturated hydrocarbon/Carbocyclic compounds/Heterocyclic compounds/Bridged systems/Spiro hydrocarbons/Terpenoids/Steroids/Macrocyclic compounds/Stereochemical notations

Audience – Students of B.Sc, M.Sc, M. Phil. and PhD in Chemistry and its allied areas, and Pharmaceutical sciences.

Textbook of Environmental Chemistry



2nd Edition

Balram Pani

ISBN: 978-93-86768-02-5/Year 2017
Size 18 cm × 24 cm/Pages 594
Paperback/₹ 625.00

Textbook of Environmental Chemistry provides fundamental knowledge of the principles of environment and its chemistry to students as well as teachers of Environmental Sciences, Environmental Chemistry and Environmental Studies at graduate, postgraduate, polytechnic, and engineering levels. This book is also useful for the students and professors of general science.

The book explores biological resources and their relationships with physical and chemical aspects of the environment. Due emphasis has been given to the regional as well as global environmental problems like water, air, soil and noise pollution, their types and sources, and their effects on the ecosystem.

New in this Edition

Apart from minor additions and deletions wherever required keeping the advancements made recently in view a new chapter. Sampling and Analysis of Environmental Pollution has been added in this edition to make the book up-to-date.

Salient Features:

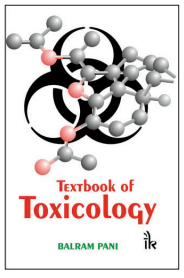
- Principles and chemical reactions that govern the behaviour of water, air and soil environment.
- Origin of various pollutants and their control.
- New fields of environmental science—Green Chemistry, Environmental Biotechnology, Polymers for Environment.
- Environmental impact, planning and laws to understand how policies and plans are formulated to protect our environment.
- Environmental pollution abatement engineering and technology.

Contents:

Our Environment and Its Chemistry/Fundamental Chemistry for Environment/Earth as a System/Biogeochemical Cycles/Resources/Atmosphere/Atmospheric Chemistry/Air Pollution/Control of Air Pollution/Aquatic Chemistry/Water Pollution/Control of Water Pollution and Water Treatment/Soil Chemistry/Soil Pollution and Its Control/Noise Pollution and Its Control/Environmental Biochemistry/Polymers for Environment/Toxicology and Toxicological Chemistry/Green Chemistry/Conservation of Nature and Environmental Laws/Sampling and Analysis of Environmental Pollution/Index

Audience – Students of Environmental Sciences, Environmental Chemistry and Environmental Studies at graduate, postgraduate, polytechnic, and engineering levels.

Textbook of Toxicology



Balram Pani

ISBN: 978-93-80578-40-8/Year 2010
Size 16 cm × 24 cm/Pages 424
Paperback/₹ 425.00

Toxicology is an interdiscipline that requires the knowledge of many areas such as analytical chemistry both organic and inorganic, biochemistry, pathology and physiology. The book is designed to provide a wide ranging, overview of the various toxicants and their effects on living organisms particularly of human begins.

The book also provides the fundamental knowledge of the principles related to toxicology, chemical toxicology, environmental toxicology and related sciences, so as to meet the challenging requirements of students as well as teachers in environmental sciences, pharmacological, medical, veterinary, biomedical science and toxicological sciences. All essential aspects of toxicology have been covered in this book.

It comprises 18 chapters in a logical sequence. Toxicology is distinguished by up-to-date insight into the harmful interactions between chemicals (xenobiotics) and biological synthesis. It gives better understanding on acute toxicology risk assessment, toxicity testing and many other areas directly or indirectly related to toxicology.

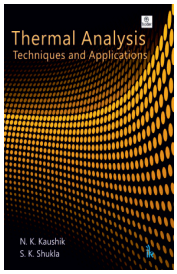
Contents:

Toxicology and Toxicological Chemistry/Principles of Toxicology/Fundamentals of Chemistry/Toxic Inorganic and Radioactive Elements/Toxic Organic Compounds/Movement and Distribution of Toxins in Environment and Ecosystem/Fate of Toxins/Toxicity/Toxic Effect of Natural and Synthetic Products/Toxicology of Organs and Organ Systems/Biomarkers/Evaluation of Toxicity and Risk Assessment/Air Pollution/Water Pollution/Toxicity Related to Soil/Ecotoxicology/Mechanisms for Minimizing Toxic Effects/Applications of Toxicology/Index.

Audience – Students and teachers in Environmental Sciences, Pharmacological, Medical, Veterinary, Biomedical Science and Toxicological Sciences

Thermal Analysis Techniques and Applications

New



N. K. Kaushik • S. K. Shukla

ISBN: 978-93-86768-73-5/Year 2023
Size 18 cm × 24 cm/Pages 288
Hardback/₹ 1495.00

This book covers the complete range of thermal characterization techniques, viz., thermogravimetric analysis, differential thermal analysis, differential scanning calorimetry, thermomechanical analysis, etc. The principles, instrumentation and applications of different thermal characterization methods are discussed with suitable examples and illustrations along with references. The book is suitable for undergraduate, postgraduate, research students and analytical scientists engaged in the field of materials analysis. The chapters are also supplemented with solved/unsolved exercises along with appendixes of relevant information.

Salient Features:

- Describes the well-established thermal analytical methods along with their applications.
- Relevant solved and unsolved exercises are listed along with supplementary information.
- Every method is described with outline, involved principle, instrumentation and relevant calculations.
- The interpretation of results is explained with calculation of secondary parameters.
- Precautionary measures during analysis and operation of instruments are also explained.

Contents

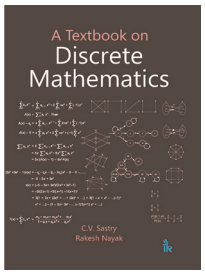
Introduction and Historical Development/Thermal Mechanometry/Thermal Effects/Thermo-Optometry/Thermogravimetric Analysis (TGA)/Complimentary Techniques/Differential Thermal Analysis (DTA)/Experiments Based on Thermal Analysis Differential Scanning Calorimetry (DSC) and Appendices/Thermometric Titrations/Glossary/Oxidation Induction Time/Temperature and Rarely Used Techniques/Index

Audience: Graduates/Postgraduate students and research scholars in chemistry

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

A Textbook on Discrete Mathematics



C.V. Sastry • Rakesh Nayak

ISBN: 978-93-86768-6-98/Year 2020
Size 18 cm × 24 cm/Pages 254
Paperback/₹ 345.00

A Textbook on Discrete Mathematics is meant for undergraduate as well as postgraduate students. It is an attempt to put together all the essential topics of discrete mathematical structures. The undergraduate students of computer science and engineering, postgraduate students of computer applications and computer science and engineering will find this book very useful. It contains several multiple-choice questions under each chapter which will be useful for those who aspire to write the GATE examination. This book could be a good textbook for undergraduate students of Computer Science, Computer Science and Engineering and post-graduate students of Computer Applications.

Salient Features:

- Covers all the important topics of discrete mathematics
- Proofs of all important theorems
- Concepts are well supported with suitable examples and diagrams
- Includes review questions as well as MCQs with answers
- Critical examples with stepwise explanation

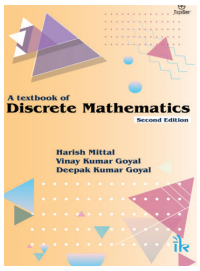
Contents:

Logic/Sets, Relations and Functions/Posets and Lattices/Algebras/Graph Theory/Generating Functions and Recurrence Relations/Finite State Automation/Permutations and Combinations Pigeonhole Principle Probability/Number Theory/Bibliography.

Audience – Undergraduate and postgraduate students of Computer Science and Mathematics.

A Textbook on Discrete Mathematics

Second Edition

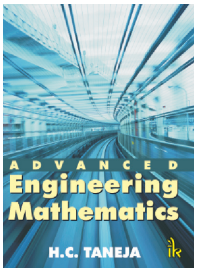


Harish Mittal • Vinay Kumar Goyal
Deepak Kumar Goyal

ISBN: 978-93-90620-25-8/Year 2023
Size 18 cm × 24 cm/Pages 438
Paperback/₹ 525.00

(See on page 25)

Advanced Engineering Mathematics



H.C. Taneja

ISBN: 978-93-82332-64-0/Year 2013
Size 18 cm × 24 cm/Pages 1616
Paperback/₹ 975.00

The text broadly divided in seven sections contains 26 chapters. The text covers topics on solid geometry, infinite series, differential and integral calculus, matrices, vector calculus, ordinary differential equations, special functions and Laplace transforms, complex analysis, Fourier analysis, partial differential equations, statistics, numerical methods and linear programming.

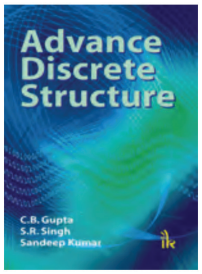
The self-contained text has numerous distinguishing features over the already existing books on the same topic. The chapters have been planned to create interest among the readers to study and apply the mathematical tools. The subject has been presented in a very lucid and precise manner with a wide variety of solved examples and exercises, which would eventually help the reader for hassle-free study. The book can be used as a text for Engineering Mathematics course at various levels.

Contents:

Solid Geometry/Matrices, Determinants and Eigenvalue Problems/Infinite Series/Differentiation and Its Applications/Partial Differentiation and Its Applications/Definite Integrals and Their Applications/Multiple Integrals and Their Applications/Vector Differential Calculus/Vector Integral Calculus/First Order Ordinary Differential Equations/Second and Higher Order Linear Differential Equations/Series Solutions of Differential Equations and Special Functions/Laplace Transforms/Fourier Series/Fourier Integrals and Fourier Transforms/Partial Differential Equations/Applications of Partial Differential Equations/Functions of a Complex Variable. Analytic Functions/Complex Integration/Numerical Methods in General/Numerical Methods for Differential Equations/Linear Difference Equations and Z-Transforms/Descriptive Statistics, Probability and Distributions/Sampling Distributions and Hypothesis Testing/Linear Programming.

Audience – B.E & B. Tech. students.

Advance Discrete Structure

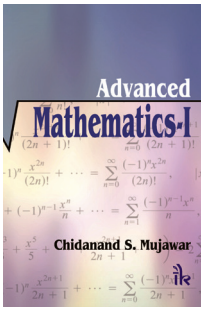


C.V. Gupta • S.R. Singh
Sandeep Kumar

ISBN: 978-93-80578-48-4/Year 2010
Size 18 cm × 24 cm/Pages 512
Paperback/₹ 605.00

(See on page 26)

Advanced Mathematics-I



Chidanand S. Mujawar

ISBN: 978-93-81141-46-5/Year 2011
Size 16 cm × 24 cm/Pages 386
Paperback/₹ 345.00

Advanced Mathematics-I is a comprehensive text for the students of engineering and technology with polytechnic background. This book provides an exhaustive understanding of mathematics. The subject is made easier with the help of numerous review questions and well graded question banks.

The topics included are: Differential Calculus, Integral Calculus, Differential Equations and Complex Numbers.

Salient Features:

- Each topic is treated in a systematic and logical manner.
- In each unit variety of problems are solved.
- Each unit has a separate question bank.
- Several worked out examples drawn from various examination papers of reputed universities.

Contents:

PART (A) Differential Calculus

Differential Calculus/Polar Co-ordinates/Partial Differentiations

PART (B) Integral Calculus

Integral Calculus/Beta and Gamma Functions

PART (C) Differential Equations

Differential Equations/Linear Differential Equations with Constant Coefficients

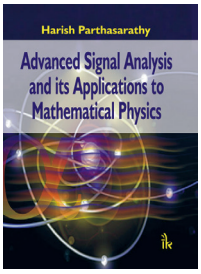
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

PART (D) Trigonometry

Complex Numbers/Model Question Papers/Index

Audience – Students of engineering and technology with polytechnic background.

Advanced Signal Analysis and its Applications to Mathematical Physics

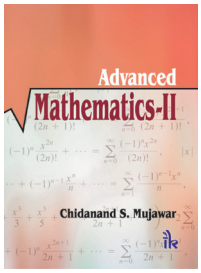


Harish Parthasarathy

ISBN: 978-93-80026-54-1/Year 2009
Size 21 cm × 28 cm/Pages 712
Hardback/₹ 1995.00

(See on page 66)

Advanced Mathematics-II



C.S. Mujawar

ISBN: 978-93-81141-87-8/Year 2012
Size 16 cm × 24 cm/Pages 200
Paperback/₹ 315.00

Advanced Mathematics-II is a text for undergraduate students of Engineering with polytechnic background. The book mainly contains Analytical Solid Geometry, Vector Algebra, Vector Calculus and Laplace Transforms. Each topic is treated in a systematic and logical manner. An outstanding and distinguishing feature of the book is the large number of typical solved examples followed by well-graded question bank for each topic. Many examples and problems have been selected from recent papers of various Engineering examinations.

The topics discussed in the book are:

Part A: Analytical Solid Geometry

Analytical Solid Geometry/Plane

Part B: Vector Algebra and Vector Calculus

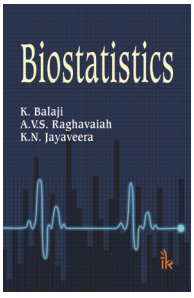
Vector Algebra/Vector Calculus

Part C: Laplace Transforms

Laplace Transforms-1/Laplace Transforms-2

Audience – Undergraduate students of Engineering with polytechnic background.

Biostatistics



K. Balaji
A.V.S. Raghavaiah
K.N. Jayaveera

ISBN: 978-93-81141-50-2/Year 2012
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 415.00

Biostatistics is meant for the students of Biostatistics, Biotechnology, Biology, Pharmacy, Medicine, Nursing, B.Com and all Life Sciences courses.

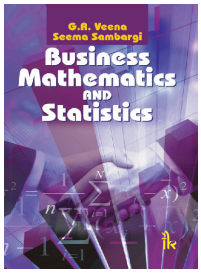
This book includes basic concepts of Biostatistics and deals with the Measures of Central Tendency, Dispersion, Distributions, Correlation, Regression, Testing of Hypothesis, Testing of Significance, Analysis of Variance, Design of Experiments, Statistical Quality Control and Non-Parametric Tests. Each chapter contains worked examples to support the theory part.

Contents:

Introduction/Statistical Investigation/Frequency Distribution/ Diagramatic Representation of Data/Measures of Central Tendency/Measures of Dispersion/ Correlation Analysis/Regression Analysis/Theory of Probability/ Distributions/Testing of Hypothesis/Testing of Significance/ Analysis of Variance/Design of Experiment/Statistical Quality Control/Non-Parametric Test/Statistical Tables/Index

Audience – M.Sc., B.Sc., B.A., M.C.A., M.Pharma, B.Pharma and B.Tech.

Business Mathematics and Statistics



G.R. Veena • Seema Sambargi

ISBN: 978-93-82332-42-8/Year 2013
Size 18 cm × 24 cm/Pages 404
Paperback/₹ 505.00

The book broadly covers B.Com/BBM syllabus of all major universities and MBA entrance exams. It provides an introduction to various basic mathematical concepts with the help of a large number of illustrations. It will help gain proficiency to solve diverse variety of problems. A special capsule containing the gist and list of formulae is incorporated at the end of each chapter. Statistical techniques and the situations where these could be usefully employed are also discussed in detail.

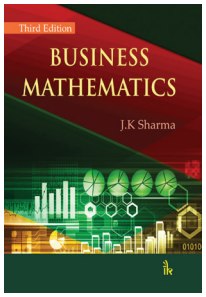
Contents:

Number System/Theory of Equations/Progression/Matrices and Determinants/Commercial Arithmetic/Ratio and Proportion/ Introduction to Statistics/Descriptive Statistics/Measures of Central Tendency/Measures of Dispersion Index numbers/Times Series Analysis/Correlation and Regression

Audience – Undergraduate B.Com/BBM, MBA students.

Business Mathematics

Third Edition



JK Sharma

ISBN: 978-93-85909-14-6/Year 2016
Size 21 cm × 28 cm/Pages 744
Hardback/₹ 695.00

This third edition presents a more focused approach to topics keeping in view the needs of the students and professionals. The treatment is exhaustive with the objective of enhancing and strengthening the conceptual as well as practical knowledge of readers about various techniques of business mathematics. A large number of new businessoriented solved as well as practice problems have been added, thus creating a bank of problems that gives a better representation of the various mathematical techniques.

This edition continues in its tradition of providing its readers an understanding of problem-solving methods, solution procedure and analysis along with the addition of two new topics on Probability Distributions and Binomial Theorem and Summation of Series

Salient Features

- Each chapter starts with Learning Objectives aiding an outcomebased learning.
- Proofs of theorems, definition of key mathematical terms, andproperties of mathematical relations and functions given in an easy-to-understand manner.
- Includes more than 750 solved problems. Also contains Illustrations which supports the learning of the topics easily.
- Provides section-end Self Practice Exercises. The book has more than 1400 problems, along with hints and solutions to the moderately to highly difficult problems.
- Concept-testing Review Questions have been included appropriately in the book.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

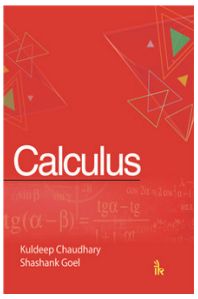
+91-011-43205400
info@ikinternational.com

Contents:

Set Theory and Binary Operations/Functions and Their Applications/ Limits and Continuity/Differentiation: Basic Concepts/Applications of Differentiation/Maxima and Minima/Partial Differentiation/Integral Calculus/Vector Algebra/Matrix and Determinant/Mathematics for Finance/Probability Theory/ProbabilityDistributions/Progressions (AP, GP, HP)/Analytical Geometry/Theory of Equations/Differential Equations and Their Applications/Input – Output Analysis/ Permutations and Combinations/Binomial Theorem and Summation of Series/Appendix/Index

Audience – B.Com/M.Com, BA/BSc (Math), BBA/MBA/PGDBM, CA, ICWA courses and other related professional.

Calculus 1



Kuldeep Chaudhary
Shashank Goel

ISBN: 978-93-85909-95-5/Year 2018
Size 18 cm × 24 cm/Pages 376
Paperback/₹ 425.00

Calculus is a fundamental topic of Mathematics. Each chapter contains the requisite theory as well as a fairly large number of solved examples, along with graphs. Plenty of problems are given at the end of each chapter. Many of the problems have been selected from various university examination papers. To cater to the specific needs of the students, a chapter on practical lab using Mathematica software — discussing plotting of various types of graphs, calculation of derivatives of functions and plotting of its derivatives, etc. — has also been given. Apart from regular courses this book will also be useful for the students appearing in various competitive exams.

Salient Features

- Topics profusely illustrated with explanatory and easy-to-reproduce diagrams.
- Clear and complete derivations in step-by-step manner.
- Complete theory with large number of solved examples along with graphs.
- Sketching of parametric curve, polar curve and conics illustrated with graphs.
- Applications of Calculus.

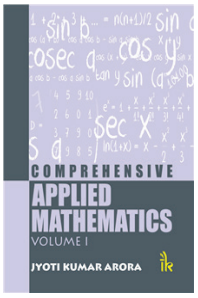
Contents:

Functions/Limit and Continuity/Derivatives and its Applications/ Successive Differentiation/Parametric Curves and Polar Curves; Conic Sections/Curvature/Asymptotes/Singular Points and Curve Tracing/Integral Calculus/Vector Valued Functions/Practical Work

Audience – B.Sc (Mathematics).

Comprehensive Applied Mathematics

Volume I



Jyoti Kumar Arora

ISBN: 978-93-82332-43-5/Year 2014
Size 18 cm × 24 cm/Pages 768
Paperback/₹ 545.00

The present book is meant for the course in Applied Mathematics of the first year Diploma courses for all the engineering branches. The objective of this book is to provide a simple presentation of the concepts, emphasizing understanding without sacrificing mathematical rigour. The book is composed of eighteen chapters. Each chapter presents illustrative solved examples and exercises. The problems given in exercises would develop interest and encourage the students to explore new ideas.

The book presents an exhaustive coverage of the theory, formulae and a large number of solved examples to make the underlying principles more comprehensive.

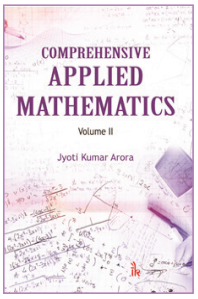
Contents:

Functions/Sequence and series: arithmetic progression/Geometric and harmonic progressions/Partial fractions/Permutations and combinations/Binomial theorem/Determinants/Exponential and logarithmic series/Trigonometry/The trignometric ratio of multiple and submultiple angle/Relation between angles and sides of a triangle/Inverse circular functions/Coordinate Geometry/Circle, Conic section (Parabola, Ellipse, Hyperbola)/Limit of a Function/ Integration/Statistics/Probability

Audience – B.E, B.Tech and diploma courses for all engineering branches.

Comprehensive Applied Mathematics

Volume II



Jyoti Kumar Arora

ISBN: 978-93-85909-40-5/Year 2017
Size 18 cm × 24 cm/Pages 880
Paperback/₹ 725.00

The present book is designed for the course in Applied Mathematics to meet the requirements of the second year Diploma courses for all the engineering branches of different Technical Boards of Education in India. The objective of this book is to provide a simple presentation of the concepts, emphasizing understanding without sacrificing mathematical rigour. The book is composed of seven chapters. Each chapter presents illustrative solved examples and exercises. The problems given in exercises would develop interest and encourage the students to explore new ideas.

The book presents an exhaustive coverage of the theory, formulae and a large number of solved examples to make the underlying principles more comprehensive.

Salient Features

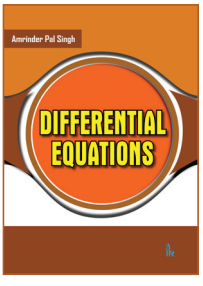
- The subject matter is presented in a very systematic and logical manner. Emphasis has been laid on fundamentals.
- On each topic problems have been divided into different types and working rules for solving them have been given.
- Large number of solved examples have been provided in every chapter for better understanding of the subject, this will also be greatly helpful in building confidence and skill among the students

Contents:

Differential Calculus - II/Integral Calculus- II/Algebra Of Matrices/ Vectors/Laplace Transforms/Fourier Series/Differential Equations of First Order and First Degree

Audience – Students of diploma and UG courses in engineering and mathematics

Differential Equations



Amrinder Pal Singh

ISBN: 978-93-90620-54-8 /Year 2022
Size: 18 cm × 24 cm/Pages 976
Paperback/₹ 975.00

Differential equations occur in connection with numerous natural phenomena and much of our understanding of nature comes from our ability to solve such equations.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Taking note of importance of differential equations, this text is designed to give a simple, lucid, rigorous and comprehensive account of the subject.

This book includes almost all the methods for finding solution of ordinary differential equations and partial differential equations with applications. The text also contains the topics of Laplace transforms and Fourier transforms and their applications in finding solutions of differential equations.

Divided in three sections the book deals with the following:

- Section A deals with ordinary differential equations
- Section B is devoted to study of partial differential equations
- Section C gives introduction to Laplace and Fourier transforms, Fourier series and their applications in finding solutions of differential equations

Contents:

SECTION A: Ordinary Differential Equations

Some Basic Concepts/Solution of Differential Equations with First Order and First Degree/Exact Differential Equations/ Bernoulli's Linear and Differential Equations/First Order Higher Degree Differential Equations/Singular Solution and Clairaut's Differential Equations/Orthogonal Trajectories/Homogeneous Linear Differential Equations/Non-homogeneous Linear Differential Equations/Method of Variation of Parameters and Undetermined Coefficients/Equations Reducible to Linear Differential Equations with Constant Coefficients/Simultaneous Differential Equations/ Solution of Differential Equations/Legendre Polynomials and Bessel Functions/Applications of Ordinary Differential Equations

SECTION B: Partial Differential Equations

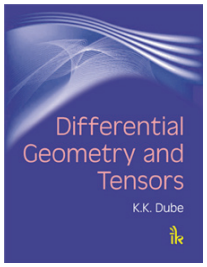
Introduction to Partial Differential Equations/Solution of Linear Partial Differential Equations of the First Order/Nonlinear Partial Differential Equations of the First Order/General Methods of Solution of Nonlinear Partial Differential Equations of the First Order/ Homogeneous Linear Partial Differential Equations with Constant Coefficients/Non-Homogeneous Linear Partial Differential Equations with Constant Coefficients/Partial Differential Equations Reducible to Equations with Constant Coefficients/Classification of Linear Partial Differential Equations of the Second Order/Monge's Methods/ Applications of Partial Differential Equations

SECTION C: Laplace Transforms, Fourier Transforms and Fourier Series

Introduction to Laplace Transforms/Laplace Transforms of Derivatives and Integrals/First and Second Shifting Theorems/ Differentiation and Integration of Laplace Transforms/Convolution Theorem and Laplace Transform of Periodic Functions/Solution of Partial Differential Equations using Laplace Transforms/Introduction to Fourier Series/Fourier Transforms/Solution of Differential Equations using Fourier Transforms/Bibliography/Index

Audience – Undergraduate and postgraduate students of Mathematics.

Differential Geometry and Tensors



K.K. Dube

ISBN: 978-93-80026-58-9/Year 2009
Size 18 cm × 24 cm/Pages 384
Paperback/₹ 425.00

The purpose of this book is to give a simple, lucid, rigorous and comprehensive account of fundamental notions of Differential Geometry and Tensors. The book is self-contained and divided in two parts. Section A deals with Differential Geometry and Section B is devoted to the study of Tensors.

Section A deals with:

- Theory of curves, envelopes and developables.
- Curves on surfaces and fundamental magnitudes, curvature of surfaces and lines of curvature.
- Fundamental equations of surface theory.
- Geodesics.

Section B deals with:

- Tensor algebra.
- Tensor calculus.
- Christoffel symbols and their properties.
- Riemann symbols and Einstein space, and their properties.
- Physical components of contravariant and covariant vectors.
- Geodesics and Parallelism of vectors.
- Differentiable manifolds, charts, atlases.

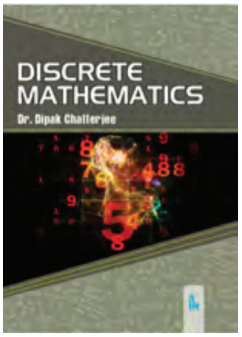
Contents:

Section A: Differential Geometry: Introduction/Theory of Curves in Space/Envelopes and Developables/Curves on Surfaces and Fundamental Magnitudes/Curvature of Surfaces and Lines of Curvature: Local Non-Intrinsic Properties of Surface/Fundamental Equations of Surface Theory/Geodesics

Section B: Tensor Calculus: Introduction/Some Preliminaries/ Tensor Algebra/Tensor Calculus/Christoffel symbols, covariant diferentiation, and their properties/Rieman Symbols/Geodesics, Riemanian Coordinates, Geodesic Coordinates and Parallelism of Vectors/Diferentiable Manifolds and Riemanian Manifolds and Riemannian Manifolds/Index.

Audience – Students of M.Sc. and B.Sc. Honours.

Discrete Mathematics



Dr. Dipak Chatterjee

ISBN: 978-93-86768-91-9/Year 2011
Size 16 cm × 24 cm/Pages 384
Paperback/₹ 695.00

The text is an excellent exposition of the essentials of Discrete Mathematics. This book is a product of long experience of teaching the subject in M.C.A. and B. Tech. courses in Calcutta University and the Institute of Engineering and Management for a number of years. The contents include propositional calculus, number theory, permutations and combinations, probability theory and graph theory. The groups, rings, fields and integral domains have come up for discussion as natural habitats of the domain of discrete mathematics. A sufficient amount of theory is included for those who enjoy the beauty of development of the subject and a wealth of applications as well for those who enjoy the power of problem solving techniques. Hopefully the students will benefit from the nice balance between the two. Apart from this the students will also enjoy the solved problems demonstrating various techniques.

Salient Features:

- Simple, precise and rigorous presentation.
- Sufficient number of worked examples provided to clarify and illustrate various concepts and facts.
- The exercises are mostly graded and motivating.
- Plenty of exercises are appended at the end of each chapter to test the understanding of the subject

Contents:

Set Theory/Mathematical Logic/Number Theory/Combinatorics/ Induction and Recursion/Group Theory/Ring, Field, Integral Domain/Lattice Theory/Boolean Algebra/Fuzzy Set Theory/ Probability/Random Variable/Theoretical Distributions/Graphs and Subgraphs/Special Graphs/Connectivity and Trees/Planar Graphs/ Digraphs/Automata Theory/Index.

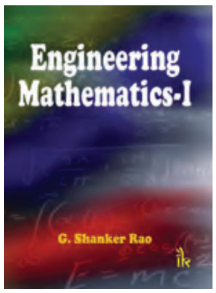
Audience – M.B.A., M.C.A, M.Com, B.Tech, B.Sc, B.B.A., B.C.A., B.Com.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Engineering Mathematics-I

(As per JNTU Syllabus)



G. Shanker Rao

ISBN: 978-93-80026-79-4/Year 2008
Size 16 cm × 24 cm/Pages 668
Paperback/₹ 495.00

The book is designed to serve as a textbook for the students of engineering.

The book spread in fifteen chapters broadly discusses:

- Convergence and divergence of the infinite series.
- Mean value theorems and expansions of functions.
- Functions of several variables.
- Curvature, evolutes and envelopes.
- Curve tracing.
- Lengths, curves, volumes and surfaces of revolution.
- Multiple integrals.
- First order and first degree differential equations.
- Orthogonal trajectories and other geometrical application.
- Higher order differential equations.
- Linear differential equations with constant coefficients.
- Applications of differential equations.
- Laplace transforms.
- Vector calculus, gradient, divergence and curl of functions.
- Green's, Gauss's and Stoke's theorem

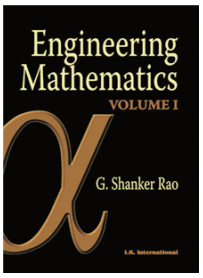
Contents:

Sequences series/Functions of single variable/Functions of several variables/Curvature, Evolutes and Envelopes/Curve Tracing/Integration and its applications - Lengths, Areas, Volumes and surface areas/Multiple integrals/Differential equations of first order and first degree/Orthogonal trajectories/Higher order linear differential equations/Linear differential equations with constant coefficients and applications of differential equations/Applications of differential equations/Laplace transforms/Vector calculus/Green's, Gauss's and stoke's theorems/Index

Audience – Undergraduate Engineering students

Engineering Mathematics

Volume I



G. Shanker Rao

ISBN: 978-81-89866-65-5/Year 2007
Size 16 cm × 24 cm/Pages 536
Paperback/₹ 395.00

Engineering Mathematics (Volume I) is designed for the first year engineering students. The topics included in the book are: matrices, differential calculus and vector calculus.

Salient Features:

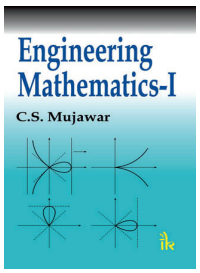
- Every topic is treated in a systematic, logical and lucid manner.
- Wide variety of exercises at all levels.
- Several worked out examples drawn from various examination papers of reputed universities.

Contents:

Matrices/Eigenvalues and Eigenvectors of a Matrix/Real and Complex Matrices/Successive Differentiation and Leibnitz's Theorem/Partial Differentiation and Curve Tracing/Differential Calculus-II/Multiple Integrals/Beta and Gamma Functions/Areas of Volumes/Vector Calculus/Integration of Vectors/Line Surface and Volume Integrals/Green's, Gauss's and Stoke's Theorems/Index

Audience – First year engineering students.

Engineering Mathematics-I



C.S. Mujawar

ISBN: 978-93-80578-63-7/Year 2010
Size 16 cm × 24 cm/Pages 420
Paperback/₹ 425.00

Engineering Mathematics–I is a comprehensive text for the students of Engineering and Technology. This book provides an exhaustive understanding subject like mathematics, understanding of the mathematical language has been made easier with the help of numerous review questions and graded exercises.

The topics included are Differential Calculus with Partial Differentiations, Integral Calculus, Vector Calculus and Linear Algebra including Transformations.

Salient Features:

- Each topic is treated in a systematic and logical manner.
- In each unit variety of problems are solved.
- Each unit has a separate question bank with multiple -choice problems.
- Several worked out examples are drawn from various examination papers of reputed universities.

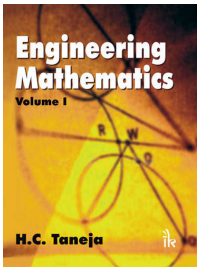
Contents:

Differential Calculus-1/Differential Calculus–2/Differential Calculus-3 /Vector Calculus/Integral Calculus/Differential Equations/Linear Algebra-1/Linear Algebra-2/Model Question Paper.

Audience – First year engineering students.

Engineering Mathematics-I

(As per UPTU Syllabus)



H.C. Taneja

ISBN: 978-93-80578-41-5/Year 2010
Size 18 cm × 24 cm/Pages 738
Paperback/₹ 495.00

The book contains thirteen chapters covering topics on differential calculus, matrices, multiple integrals, vector calculus, ordinary differential equations, series solutions and special functions, Laplace transforms, Fourier series, Partial differential equations and applications. The self-contained text is applications oriented and contains a wide variety of examples, objective type questions and exercises.

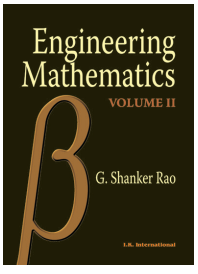
Contents:

Differentiation and its Applications/Partial Differentiation and its Applications/Matrices and Eigenvalue Problems/Multiple Integrals and Their Applications/Vector Differential Calculus/Vector Integral Calculus/First Order Ordinary Differential Equations/Second and Higher Order Linear Differential equations/Series Solutions of Differential Equations and Special Functions/Laplace Transform/Fourier Series/Partial Differential Equations/Applications of partial Differential Equations/Appendix/Index.

Audience – Students of B.E/B.Tech Level.

Engineering Mathematics

Volume II



G. Shanker Rao

ISBN: 978-81-906566-0-3/Year 2008
Size 16 cm × 24 cm/Pages 668
Paperback/₹ 475.00

Engineering Mathematics (Volume II) is a comprehensive text for the students of engineering.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

The topics included are:

Differential equations, Special functions, Laplace transforms, Partial differential equations and applications of partial differential equations.

Salient Features:

- Each topic is treated in a systematic and logical manner.
- Wide variety of exercises at all levels.
- Several worked-out examples drawn from various examination papers of reputed universities.

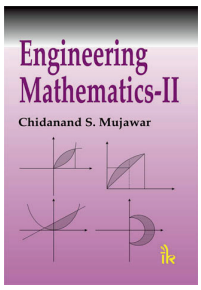
Contents:

Basic Concepts of Differential Equations/First Order and First Degree Differential Equations/Differential Equations of First Order but not of First Degree/Total Differential Equations/Orthogonal Trajectories /Higher Order Linear Differential Equations/Linear Differential Equations with Constant Coefficients and Applications of Differential Equations/Series Solutions of Differential Equations/Special Functions/Laplace Transforms/Partial Differential Equations and Fourier Series/Applications of Partial Differential Equations/Index

Audience – First year engineering students.

Engineering Mathematics-II

C.S. Mujawar



ISBN: 978-93-81141-10-6/Year 2011
Size 16 cm × 24 cm/Pages 392
Paperback/₹ 425.00

Engineering Mathematics – II is a comprehensive text for the students of Engineering and Technology. This book provides an exhaustive understanding subject like mathematics. Understanding of mathematical language has been made easier with the help of numerous review questions and graded exercises.

The topics included are differential equations of first order and higher degree. Linear differential equations, equations reducible to linear differential equations, partial differential equations, multiple integrals, vector integration and Laplace Transforms.

Salient Features:

- Each topic is treated in a systematic and logical manner.
- In each unit variety of problems solved.
- Each unit has a separate question bank with multiple-choice problems.
- Several worked out examples are drawn from various examination papers of reputed universities.

Contents:

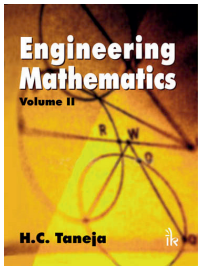
Differential Equations - 1/Differential Equations - 2/Differential Equations - 3/Partial Differential Equations/Multiple Integrals/ Vector Integration/Laplace Transforms – 1/Laplace Transforms – 2/ Model Question Paper/Index

Audience – First year engineering students.

Engineering Mathematics

Volume II

H.C. Taneja



ISBN: 978-93-80578-42-2/Year 2011
Size 18 cm × 24 cm/Pages 534
Paperback/₹ 475.00

Engineering Mathematics (Volume II), is meant for the third and fourth semester students of B.E./B.Tech. level of various engineering colleges.

The book contains ten chapters covering topics on complex analysis, statistical techniques and numerical techniques. The self-contained text is applications oriented and contains a wide variety of examples, objective type questions and exercises.

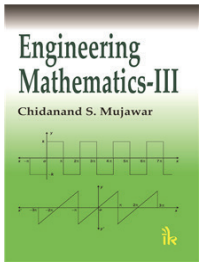
Contents:

Functions of a Complex Variable/Complex Integration/Taylor Series, Laurent Series and the Residue Theorem/Descriptive Statistics, Probability and Distributions/Correlation and Regression/Sampling Distributions and Hypothesis Testing/Time Series/Statistical Quality Control/Numerical Methods in General/Numerical Methods for Differential Equations/Index

Audience – Students of B.E/B.Tech Level.

Engineering Mathematics-III

C.S. Mujawar



ISBN: 978-93-81141-36-6/Year 2011
Size 16 cm × 24 cm/Pages 384
Paperback/₹ 365.00

Engineering Mathematics-III is a comprehensive text for the students of Engineering and Technology. This book provides an exhaustive understanding subject like mathematics, understanding of the mathematical language has been made easier with the help of numerous review questions and graded exercises.

Salient Features:

- Each topic is treated in a systematic and logical manner.
- In each unit variety of problems are solved.
- Each unit has a separate question bank with multiple-choice problems.
- Several worked out examples are drawn from various examination papers of reputed universities.

Contents:

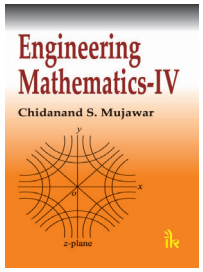
PART A/Fourier series/Fourier transfers/Applications of partial differential equations/Curve fitting and optimization

PART B/Numerical methods-1/Numerical methods-2/Numerical solutions of partial differential equations/Difference equations and Z-transforms/Model Question Paper/Index

Audience – First year engineering students.

Engineering Mathematics-IV

C.S. Mujawar



ISBN: 978-93-81141-68-7/Year 2012
Size 16 cm × 24 cm/Pages 310
Paperback/₹ 355.00

Engineering Mathematics-IV is a comprehensive text for the students of Engineering and Technology. This book provides an exhaustive understanding of the subject like Mathematics. Understanding of Mathematical language has been made easier with the help of numerous review questions and graded exercises.

The topics included are Numerical Methods, Complex Variables, Special Functions, Probability Theory and Sampling Theory.

Salient Features:

- Each topic is treated in a systematic and logical manner.
- Variety of solved problems in each unit.
- Several worked out examples drawn from various examination papers of reputed universities.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

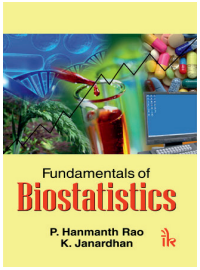
+91-011-43205400
info@ikinternational.com

Contents:

Numerical Methods (1)/Numerical Methods (2)/Functions of Complex Variables (1)/Complex Variables (2)/Special Functions/ Probability Theory (1)/Probability Theory (2)/Sampling Theory/Model Question Paper/Index

Audience – UG students of Engineering and Technology.

Fundamentals of Biostatistics



P. Hanmanth Rao
K. Janardhan

ISBN: 978-93-80578-71-2/Year 2011
Size 16 cm × 25 cm/Pages 292
Paperback/₹ 385.00

Biological inquiry needs knowledge of statistical techniques, mathematical competence and support of computer programmes. This text book has been written in a simple and easy to understand language and presents a broad collection of data analysis techniques.

Important features of the book include:

1. Worked out examples
2. Exercise at the end of each chapter
3. University question
4. A Chapter on Mathematics.

The text book serves the need of different Biology courses, Agricultural sciences, Medicine, Pharmacy, Biotechnology, Genetics, Home science and Nutrition.

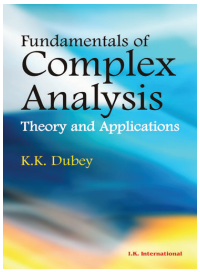
Contents:

Mathematics/Frequency Distribution—Measures of Central Values and Dispersion/Probability/Probability Distribution/Concept of Sampling and Tests of Hypotheses/*t*-distribution/Chi-Square Distribution/Linear Regression and Correlation/Analysis of Variance (ANOVA)/Annexure/Index.

Audience – Undergraduate students of Biology, Agricultural science, Medicine, Pharmacy, Biotechnology, Genetics, Home Science and Nutrition.

Fundamentals of Complex Analysis

Theory and Applications



K.K. Dube

ISBN: 978-93-80026-02-2/Year 2009
Size 14 cm × 21.5 cm/Pages 296
Paperback/₹ 345.00

The book divided in ten chapters deals with:

- Algebra of complex numbers and its various geometrical properties, properties of polar form of complex numbers and regions in the complex plane
- Limit, continuity, differentiability
- Different kinds of complex valued functions
- Different types of transformations
- Conformal mappings of different functions
- Properties of bilinear and special bilinear transformation
- Line integrals, their properties and different theorems
- Sequences and series, Power series, Zero's of functions, residues and residue theorem, meromorphic functions, different kinds of singularities
- Evaluation of real integrals
- Analytic continuation, construction of harmonic functions, infinite product, their properties and Gamma function
- Schwarz-Christoffel transformations, mapping by multi-valued functions, entire functions
- Jenson's theorem and Poisson-Jenson theorem.

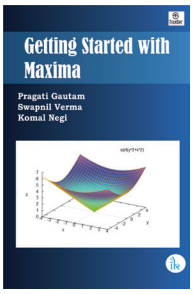
The book is designed as a textbook for UG and PG students of science as well as engineering.

Contents:

Algebra of Complex Numbers/Analytic Functions/Elementary Functions/Conformal Mappings/Complex Integration/Complex Sequences, Series and Power Series/Zeros Singularities and Residue/ Special Topics/Mapping by Multivalued Functions and Schwarz-Christoffel Transformation/Growth of Entire Functions/Index.

Audience – UG and PG students of science and engineering.

Getting Started with Maxima



Dr. Pragati Gautam
Swapnil Verma
Ms. Komal Negi

ISBN: 978-93-90620-96-8/2023
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

Maxima is an unbelievable powerful and useful environment for Symbolic and Numerical Computing and Data-visualization. Maxima being open access gave people a whole new power and sophistication of the symbolic capabilities that have gone unmatched for decades.

Maxima has wonderful flexibility and can do rigorous, robust computation with stunning symbolic and superlative graphical capabilities. It begins with the essential topics like Operating in Maxima, Calculus, Linear Algebra, etc., and then take the user to advanced topics such as numerical methods to solve initial value problems,the students at various levels sieve out important solved examples.

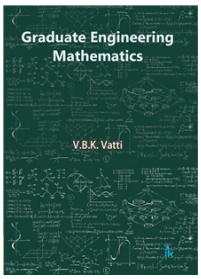
This book is intended primarily as a text for a single or multi-semester course in Mathematics.Getting Started with Maximais suitable for undergraduate and graduate level engineering courses and can be used as an excellent reference for professionals and students of Applied Mathematics.

Salient Features:

- Introduces latest version and problems of Maxima.
- Numerous Example with a focus on practical application.
- Describes basic techniques of Maxima.
- Presents a qualitative understanding of the subject.

Audience: B.Sc. (Hons.) and B.Tech. Courses.

Graduate Engineering Mathematics



VBK Vatti

ISBN: 978-93-86768-39-1/Year 2020
Size: 18 × 24 cm/Pages 1248
Hardback/₹ 875.00

Graduate Engineering Mathematics is designed primarily as a textbook for the students of engineering and physical sciences. This book introduces concepts of mathematics such as Linear Algebra and Calculus, Numerical Methods, Series, Differential Equations, Transforms, Complex Analysis, Statistics, Probability and Linear Programming. This book will also be useful as a reference text to engineers and scientists. The book has seven parts comprising a total of 25 chapters. It contains as many as 644 worked examples and more than 1250 exercise problems with answers.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Salient Features:

- Simple and systematic presentation of concepts.
- Large number of worked examples to reinforce the concepts.
- Clear exposition of the mathematical concepts.
- Exercises at the end of each chapter with answers.

Contents:

Part I: Linear Algebra and Calculus: Matrices, Vectors and Eigenvalue Problems/Direct and Indirect Methods for Solving Linear Systems/ Functions of Several Variables/Multiple Integrals and βΓ Functions/ Vector Differential and Integral Calculus/Solid Geometry

Part II: Numerical Methods: Numerical Solution of Non-linear Equations/Interpolation/Numerical Differentiation and Integration/ Numerical Solution of Initial Value Problems/Numerical Solution of Partial Differential Equations

Part III: Series: Infinite Series/Fourier Series

Part IV: Differential Equations: Ordinary Differential Equations of First Order and Degree One to Higher Power/Linear Differential Equations with Constant Coefficients/Series Solution of Differential Equations and Special Functions/Partial Differential Equations and Their Applications

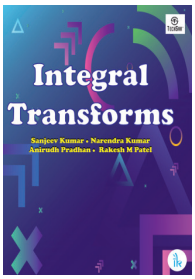
Part V: Transforms: Laplace Transforms/Fourier Transforms/ Difference Equations and Z-Transforms

Part VI: Complex Analysis: Complex Differentiation and Integration/ Power Series, Mappings and Residue Integration

Part VII: Statistics, Probability and Linear Programming: Curve Fitting, Correlation and Regression/Probability, Sampling and Inference/Linear Programming/Appendices

Audience – BE & BTech students.

Integral Transforms



Sanjeev Kumar
Narendra Kumar
Anirudh Pradhan

New

ISBN: 978-93-90620-57-9/2023
Size 18 cm × 24 cm/Pages 372
Paperback/₹ 495.00

Integral transform plays a vital role in the study of many applied engineering topics. Laplace transform and Fourier transform are basic tools to solve these problems. Fourier transform is only able to retrieve the global frequency content of a signal while the time information is lost. This book covers fundamental concepts of various integral transforms to understand and solve many applications in science and engineering. The book is suitable as a textbook for graduate, postgraduate students of applied science and engineering graduate students and as a reference for professionals in mathematics, engineering, and applied sciences. It presents a systematic development of the underlying theory as well as a modern approach to Fourier transform, Laplace transform, Hankel transform, Mellin transform, wavelet, and Z - transforms with their simple problems to solve and apply to develop various biomedical life saving tools.

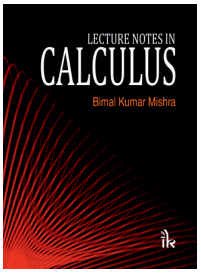
Salient Features:

- Simple approach to solve complex problems in transforms
- Applications in mechanical vibrations, electrical networks, quantum mechanics, integral and functional equations
- Better solution approach that facilitates a clear understanding of physical explanations
- Unsolved problems for understanding the topics deeply.

Audience – Graduate, postgraduate students of applied science and engineering graduate students and as a reference for professionals in mathematics, engineering, and applied sciences.

Shelving – Mathematics

Lecture Notes in Calculus



Bimal Kumar Mishra

ISBN: 978-93-80578-28-6/Year 2010
Size 16 cm × 24 cm/Pages 272
Paperback/₹ 345.00

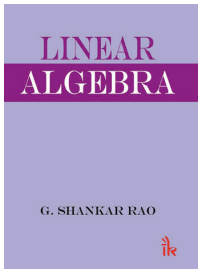
Lecture Notes in Calculus provides undergraduate students with a concise and practical introduction to the primary concepts and techniques of Calculus. With a strong emphasis on basic concepts and techniques throughout, it explains the theory behind each technique as simply as possible, alongwith illustrative examples and real life applications.

Contents:

Limits and Continuity/Successive Differentiation/Series Expansions/ Symptotes/Curvature/Oncavity, Convexity: Points of Inflexion/ Curve Tracing/Integration of Irrational Functions/Definite Integrals/ Lengths of Plane Curves.

Audience – Undergraduate students.

Linear Algebra



G. Shankar Rao

ISBN: 978-93-80026-99-2/Year 2011
Size 16 cm × 24 cm/Pages 280
Paperback/₹ 355.00

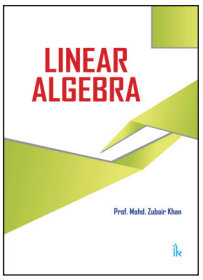
This book introduces some of the elementary concepts and results of Linear Algebra. It explains basic concepts and techniques of Linear Algebra and makes these accessible to the undergraduate students. The fundamental concepts of Rings, Integral domains, Fields, Ideals, Quotient Rings, Homomorphism of Rings, Polynomial Rings, Systems of Linear equations, Vector Spaces, Linear Transformations, Vector Space Isomorphism, Rank of a Matrix, Characteristic Roots, Characteristic Vectors of a Square Matrix, Inner Product Spaces and Real Quadratic forms are discussed. Each chapter includes clear statements of pertinent definitions, principles and theorems together with illustrative and descriptive material.

Contents:

Rings/Spring and Ideals/Homomorphisms and Isomorphisms/ Euclidian Rings/Polynomial Rings/Vector Space/Linear Transformations Isomorphism/Matrix of Linear Transformation/Inner-product Spaces/Index.

Audience – Undergraduate engineering students.

Linear Algebra



Prof. Mohd. Zubair Khan (Retd.)

ISBN: 978-93-90620-11-1/Year 2021
Size: 18 cm × 24 cm/Pages 260
Paperback/₹ 375.00

Linear Algebra will be a very useful resource for the students and researchers who want to understand the key concepts of Linear Algebra in an easy way. This book has been divided into nine chapters with Chapter 1, 2 and 3 focusing on different types of matrices, sets, groups, rings and fields, vector spaces, and linear dependence and independence along with examples. Chapter 4 and 5 covers linear transformations along with the matrix representation of the sum and composition of linear transformations. Chapter 6 is dedicated to dual spaces whereas Chapter 7 describe an important topic of eigen values and eigen vectors. Chapter 8 and Chapter 9 deals with inner product, bilinear functional and quadratic forms. This book also contains good number of solved examples which help the reader in better understanding of the topic.

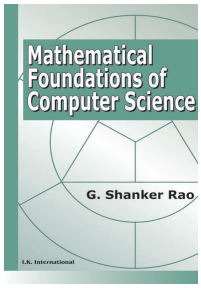
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Contents:

Matrices and Linear Equations/Sets and Algebraic Structures/Vector Spaces/Linear Transformation/Algebra of Linear Transformations/Dual Spaces/Diagonalization/Inner Product Spaces/Bilinear and Quadratic Forms/Index

Audience – B.Sc Maths/B.Sc Maths(Hons)/B.Com (Maths)/B.Com Maths(Hons).

Mathematical Foundations of Computer Science



G. Shanker Rao

ISBN: 978-81-88237-49-4/Year 2006
Size 16 cm × 24 cm/Pages 472
Paperback/₹ 445.00

Salient Features:

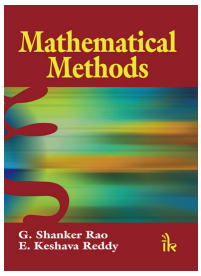
- Comprehensive discussions on logic, functions, algebraic systems, recurrence relations and graph theory.
- Wide variety of exercises at all levels.
- Several worked out examples.

Contents:

Mathematical Logic/Predicate Logic/Set Theory/Algebraic Structures/Elementary Combinatorics/Recurrence Relations/Graph Theory/Application of Graph Theory/Bibliography.

Audience – B.Tech. and M.C.A. students.

Mathematical Methods



G. Shanker Rao • E. Keshava Reddy

ISBN: 978-93-80026-74-9/Year 2009
Size 16 cm × 24 cm/Pages 688
Paperback/₹ 445.00

Mathematical Methods offers the following topics:

Interpolation, curve fitting matrics, Eigen-values and Eigenvectors, Quardratic forms, Fourier series, Partial differential equations and Z-transforms. Each chapter is supplemented with a number of worked-out examples as well as number of problems to be solved by the students. This would help in the better understanding of the subject.

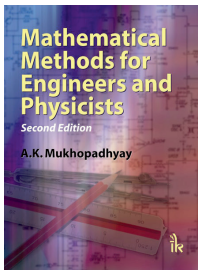
Contents:

Preface/Matrices/Eigenvalues and Eigenvectors of a Matrix/Real and Complex Matrices/Quadratic Forms/Solution of Algebraic and Transcendental Equations/Interpolation/Curve Fitting/Numerical Differentiation and Integration/Numerical Solution of Ordinary Differential Equations/Fourier Series/Fourier Integral Transform/Partial Differential Equations/Applications of Partial differential Equations/Z-Transforms/Index.

Audience – Engineering Mathematics and Computer Science students.

Mathematical Methods for Engineers and Physicists

Second Edition



A.K. Mukhopadhyay

ISBN: 978-93-80578-03-3/Year 2010
Size 18 cm × 24 cm/Pages 1048
Paperback/₹ 695.00

The book introduces to the students of B.E., B.Tech., AMIETE and AMIE courses, the important application oriented areas of mathematics, specially in the field of technology and general science. It also caters to the requirements of the B.Sc.(Hons.) and M.Sc. students of Physics and Mathematics as well as institutions offering extended mathematical training and follows the general trend of broadening the curriculum in mathematics.

The newly added chapters include Fourier transform, Laplace transform, Z-transform and Probability theory and Statistics. Different aspects of direct and inverse transform have been added. Laplace transform method, being a very powerful tool for solving linear and non-linear differential equations have been discussed. Methods of solving integral equations have been discussed in a separate chapter. The book is an indispensable companion to the readers on account of its wide discussion of varied subject matter and solution of plenty of examples.

Contents:

Differential Equation/Linear Differential Equations of Second Order/Some Special Types of Second Order Differential Equations/Application of Differential Equations in Solving Physical and Engineering Problems/Series Solution of a Differential Equation/Solution of Some Special Differential Equations/Fourier Series/Partial Differential Equations/Numerical Solution of Differential Equations/Special Functions/Integral Equations/Fourier Transform/Calculus of Variation/Functions of Complex Variables/Laplace Transform/Z-Transform/Probability Theory and Statistics/Reference/Index.

Audience – B.E., B.Tech., AMIETE and AMIE courses.

Matrices: Theory and Applications



Kaveri Kanchan Kumari
Mampi Saha

ISBN: 978-81-959662-6-4/Year 2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

A comprehensive text on matrix theory and its applications, this book is intended for a broad range of students in mathematics, engineering, and other areas of science at the university level. The book aims to provide the reader with comprehensive knowledge of fundamental concepts. The book includes many examples, applications and exercises for the reader, so that it can used both by students interested in theory and those who are mainly interested in learning the techniques.

Salient Features:

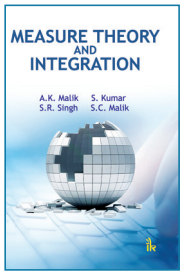
- Inclusion of Solved examples.
- Each chapter contains applications of matrices used in various fields.
- Previous years' solved questions.

Audience – UG Students of all branches of Engineering.

Shelving – Mathematics

Measure Theory and Integration

Volume II



A. K. Malik • S. K. Gupta
S. R. Singh • S. C. Malik

ISBN: 978-93-85909-43-6/Year 2017
Size 16 cm × 26 cm/Pages 176
Paperback/₹ 345.00

Integration is one of the two cornerstones of analysis. In the fundamental work of Lebesgue, integration is presented in terms of measure theory. This introductory text starts with the historical development of the notion of the set theory and integral theory. From here, the reader is naturally led to the consideration of the Lebesgue Integral, where abstract integration is developed via the measure theory. The important topics like the Outer Measure, Cantor's Ternary Set, Measurable Function, the Lebesgue Integral, Fundamental Theorem of Calculus, Lp-spaces, Fubini's Theorem, the Radon-Nikodym Theorem, and so on are discussed.

The text is written in an informal style to make the subject matter easily comprehensible. Concepts have been developed with the help of motivating examples, probing questions, followed by numerous exercises. The book is suitable both as a textbook for an introductory course on the topic or for self-study. The core material is interspersed with examples, theorems, recapitulations, multiple choice questions, true/false questions and fill-in-the-blanks questions after relevant discussions of the topics.

Salient Features:

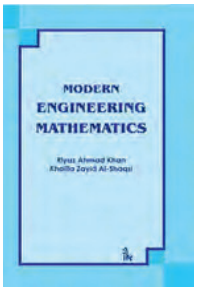
- Contains a detailed account of some of the popular measures like Lebesgue, Borel, Jordan.
- Integration as a measuring technique is appropriately discussed.
- All the theorems are accompanied by detailed, step-by-step proofs.
- Each chapter ends with a rich suite of exercise problems, objective questions and summary.
- Contains a useful appendix on important theorems on Set Theory.

Contents:

Countability of Sets/Lebesgue Measure/Measurable Functions/ Lebesgue Integral/Differentiation and Integration/Lp Spaces/ Product and Signed Measures/Appendix: Sets/References/Index.

Audience – Postgraduate/MPhil/PhD students of Mathematics. NET aspirants.

Modern Engineering Mathematics



Riyaz Ahmad Khan
Khalifa Zayid Al-Shaqsi

ISBN: 978-93-86768-16-2/Year 2019
Size 16 cm × 24 cm/Pages 152
Paperback/₹ 395.00

This book is meant for the students of Engineering courses, specially of Gulf Cooperation Council (GCC) countries. Necessary theory is employed in outlining definitions, formulae, laws, etc.; however, intention is to introduce the topics through examples, applications and analogies, instead of abstract theoretical arguments. The book explains:

- basics of differential equations, formation of differential equations, order and degree;
- solutions of differential equations by variable separable, homogenous, non-homogenous, linear, nonlinear exact, and reducible to exact differential equations;
- orthogonal trajectories;
- nth order differential equations, simultaneous differential equations;
- boundary value problems;
- Laplace transform;
- Z-transform; and
- Fourier transform.

Salient Features:

- Fundamentals of the topics have been explained with a microanalysis.
- Solved examples of different kinds of problems have been given to make the reader to understand the skills necessary to solve the problems.
- Unsolved exercise of different kinds of problems have also been given.

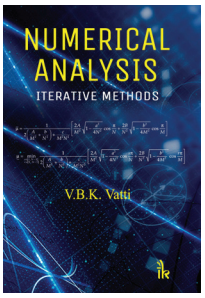
Contents:

Differential Equations and Their Formation/Differential Equations of First Order and First Degree/Applications of First Order Differential Equations, *n*th Order Differential Equations/Boundary Value Proglem/Laplace Transforms/Partial Differential Equation/ *z*-transform/Fourier Transform/References/Index

Audience – BE & BTech students.
Shelving – Mathematics

Numerical Analysis

Iterative Methods



Dr. V.B.K. Vatti

ISBN: 978-93-85909-00-9/Year 2016
Size 16 cm × 24 cm/Pages 228
Paperback/₹ 695.00

Iterative methods or those methods by which approximations are improved until one receives an accurate value comprise an important learning objective in mathematics. Keeping this in mind, the main objective of this book is to incorporate important iterative methods in a single volume, at an appropriate depth. This will enable students and researchers to apply these iterative techniques to scientific and engineering problems. The text discusses in detail the methods of solving linear systems of equations, nonlinear equations, system of non-linear equations, initial value problems and partial differential equations of all the three types by the use of iterative methods. The text is substantiated with 335 problems including many solved examples and exercises with answers at the end of each chapter.

Salient Features:

- The book comprises five chapters and each of them discusses the method of employing the conventional and new iterative techniques to the problems of interest in a simple and elegant manner.
- Illustrative examples and exercises at the end of each chapter with answers are included throughout the book to facilitate an easier understanding of the subject.
- Numerical computations featured in this book further offer special interest to engineers, researchers and computational scientists.
- The major results of the book are expected to find applications in many areas of engineering, science and technology.
- The topics covered in the book are explicit in nature, student friendly and self-explanatory.

This book incorporates the material covered in the courses of undergraduate and postgraduate programs in engineering, science and technology and will be of great help to scientists, engineers, researchers and students. It can be used both as a text and a good reference book for those who run after numerical evaluations.

Contents:

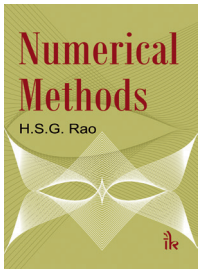
1. Numerical Solution of Linear Systems of Equations
2. Numerical Solution of Non-linear Equations
3. Numerical Solution of System of Non-linear Equations
4. Numerical Solution of Initial Value Problems
5. Numerical Solution of Partial Differential Equations

Bibliography

Index

Audience – B.Tech/M.Tech (Engineering Mathematics/Advanced Numerical Methods), B.Sc/M.Sc (Mathematics)

Numerical Methods



H.S.G. Rao

ISBN: 978-93-80578-54-5/Year 2011
Size 16 cm × 24 cm/Pages 424
Paperback/₹ 325.00

Designed for the core course on the subject, this book seeks to provide students with fundamentals of numerical methods. Logical arrangement of topics, clarity of presentation and illustration through maximum examples and exercise aid the student in becoming adept at applying the methods. This book is

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

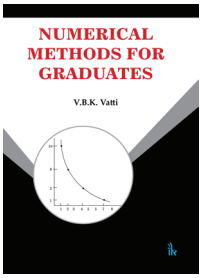
written keeping in mind undergraduate and postgraduate students of Engineering and Science students of all disciplines.

Contents:

Errors and Approximations/Fundamental Concepts from the Theory of Equations/Simultaneous Linear Equations/Eigenvalues and Eigenvectors/Finite Differences/Interpolation/Numerical Differentiation/Numerical Integration/Numerical Solution of Ordinary Differential Equations/Numerical Solution of Partial Differential Equations/Index

Audience – UG and PG students of Engineering and Science.

Numerical Methods for Graduates



V.B.K. Vatti

ISBN: 978-93-90620-37-1/Year 2022
Size: 18 cm × 24 cm/Pages 340
Paperback/₹ 495.00

This book will enable students and researchers to apply the numerical techniques given in this book to solve scientific and engineering problems. The text discusses in detail the methods of solving algebraic and transcendental equations, linear systems of equations, system of non-linear equations, initial value problems and partial differential equations of all the three types by the use of iterative methods. Also, Finite differences, Interpolation, Numerical differentiation and Numerical integration topics have been discussed in detail. The text is enriched with more than 500 problems including many solved examples and exercises given at the end of each chapter.

Salient Features:

- Illustrative examples and exercises at the end of each chapter with answers are included throughout the book to facilitate an easier understanding of the subject.
- Numerical computations featured in this book further offer special interest to engineers, researchers and computational scientists.
- The major results of the book are expected to find applications in many areas of engineering, science and technology.

Contents:

Numerical Solution of Algebraic and Transcendental Equations/Finite Differences and Interpolation/Numerical Differentiation/Numerical Integration/Correlation and Regression Analysis/Solution of Linear Systems by Indirect Methods/Solution Non-linear Systems by Indirect Methods/Numerical Solution of Ordinary Differential Equations/Iterative Solution of Partial Differential Equations/Index

Audience – B. Tech Students/M.Tech Students/Researchers.

Operations Research



C.B. Gupta
P.K. Dwivedi
Sunil Kumar Yadav

ISBN: 978-93-84588-49-6/Year 2016
Size 18 cm × 24 cm/Pages 498
Paperback/₹ 525.00

Designed for B.Tech students the book deals with:

- Introduction & Development of OR
- Linear Programming
- T.P & A.P
- Dynamic Programming
- Theory of Decision
- Game Theory
- Integer Programming
- Inventory Models
- Simulation
- Queuing Theory

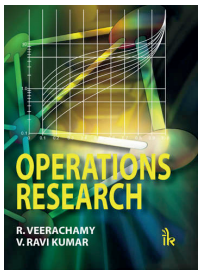
Sufficient amount of solved examples and related unsolved questions are also given to related topics. The book would be useful for engineering students as well as students pursuing other streams.

Contents:

Introduction and development of operations research/Linear programming/Transportation problems or "distribution models"/Assignment problems/Dynamic programming/Theory of decision/Game theory (competitive strategies)/Integer programming/Deterministics and stochastic inventory models/Simulation/Queueing theory (waiting lines)/Index

Audience – B. Tech. students.

Operations Research



R. Veerachamy
V. Ravi Kumar

ISBN: 978-93-80026-40-4/Year 2010
Size 18 cm × 24 cm/Pages 1260
Paperback/₹ 625.00

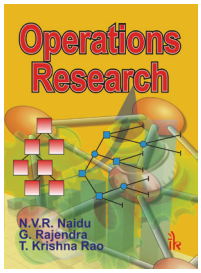
This book is offers analytical and empirical tools for managerial decision-making. It employs several pedagogical devices to help the students to learn the new concepts quickly and absorb them fully. The concept/example format introduced in this text helps the students to formulate the real world problems easily. The Excel template orientation outlined throughout the text will help the students to obtain the needed solutions for all the problems given in exercises. The numerous solved examples under each section will enable the students to solve any type of tricky questions in the university examinations. This book meets the requirements of Engineering and Management students at graduate and postgraduate levels.

Contents:

Nature and Scope of Operations Research/Linear Programming-I/Linear Programming–II/Linear Programming-III/Transportation and Transhipment Problems/Integer Programming/Assignment Problem/Sequencing Problems/Replacement Models/Waiting Line Models/Decision Theory/Network Analysis/Inventory Control Models/Theory of Games-I/Theory of Games-II/Simulation/Goal and Dynamic Programming/Markov Processes Business Forecasting/Invest and Break-Even Analysis/Index.

Audience – Undergraduate and postgraduate students in Management, Engineering, M.Com, CA and ICWA.

Operations Research



N.V.R. Naidu
G. Rajendra
T. Krishna Rao

ISBN: 978-93-80578-94-1/Year 2011
Size 18 cm × 24 cm/Pages 912
Paperback/₹ 675.00

Operation Research has been introduced as core subject in some graduate and postgraduate programmes. It has been established that many decisions which are otherwise very cumbersome are now made easy with the techniques of OR. Even for the best managers, sometime it is difficult to make decisions in a growing complex business environment. OR has made the decision-making processes easier that lead to better utilization of scarce resources and thus growth and prosperity of an organization.

All the Important OR topics are covered and it is hoped that this book will be very handy and useful to the B.E./B.Tech.,M.B.A. and other UG and PG Students, practising managers and industrial engineers. Varieties of practical problems are presented with solutions.

Importance has been given to the requirement of students by taking all precautions and all the problems that a student may face while studying the subjects.

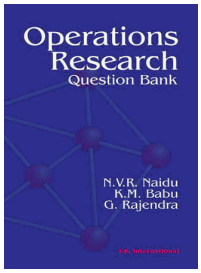
Contents:

Origin and Development of Operations Research/Techniques of Operations Research/Linear Programming Transportation Problem/Assignment Problem/Travelling Salesman/Queueing Theory/Game Theory/Network Analysis/Replacement Models/Sequencing Models/Revised Simplex Method/Sensitivity Analysis/Integer Programming/Markov Chains/Inventory Control/*Index*.

Audience – Undergraduate and postgraduate students in Management, Engineering, M.Com, CA and ICWA.

Operations Research

Question Bank



N.V.R. Naidu
K.M. Babu
G. Rajendra

ISBN: 978-81-89866-42-6/Year 2007
Size 14 cm × 21 cm/Pages 192
Paperback/₹ 295.00

Operation Research has emerged as the most spectacular aspect of optimization techniques. Practising professionals usually rate operations research as the most useful subjects studied in college.

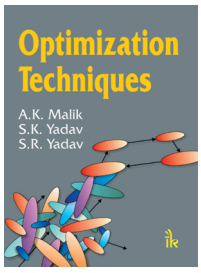
Operations Research is designed for the students of industrial engineering and management. This book comprises 12 chapters and provides the introduction of each chapter and various problems of real practical situations in the organizations as well as in daily life.

Contents:

Linear Programming Problem/Graphically and Simplex Problems/Big M Method Problems/Dual Simplex Problems/Transportation Problems/Assignment Problems/Queuing Problems/Project Management Problems/Game Theory Problems/Replacement Problems/Inventory Management Problems/Sequencing Problems.

Audience – Undergraduate and postgraduate students in Management, Engineering, M.Com, CA and ICWA.

Optimization Techniques



A.K. Malik
S.K. Yadav
S.R. Yadav

ISBN: 978-93-81141-81-6/Year 2012
Size 18 cm × 24 cm/Pages 248
Paperback/₹ 405.00

Optimization Techniques is designed for undergraduate, postgraduate and research students of various universities offering the course in optimization techniques and operations research. The book contains applications of optimization techniques, classical optimization techniques, formulation of linear programming problems, solution by graphical and simplex method of linear programming problems, artificial techniques: Big method, Two-Phase method, duality of linear programming problem, sensitivity analysis, assignment and transportation problems, sequencing problems, project scheduling : CPM and PERT, dynamic programming problem, travelling salesmen problem, non-linear programming (constrained and unconstrained search techniques).

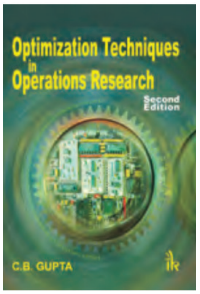
Contents:

Introduction to Optimization Techniques/Classical Optimization Techniques/Linear Programming Problem-(Formulation)/Linear Programming Problem-II (Graphical method)/Simplex & Revised Simplex Method/Duality in Linear Programming/Post Optimality Analysis or Sensitivity Analysis/Transportation Problems/Assignment Problems/Sequencing/Project Scheduling/Dynamic Programming/Non-Linear Programming Problem/Index

Audience – Students of UG & PG engineering & management.

Optimization Techniques in Operation Research

Second Edition



C.B. Gupta

ISBN: 978-93-81141-67-0/Year 2012
Size 18 cm × 24 cm/Pages 386
Paperback/₹ 425.00

This book meets the requirements of Engineering/Science and Management students at graduate and postgraduate levels.

Main topics discussed in the book are:

- Linear programming including duality and sensitivity analysis.
- Non-linear programming including quadratic and separable programming.
- Transport and assignment problem.
- Game theory.
- Integer programming including Traveling Salesman problem.
- Goal programming including multi-objective programming.
- Network analysis (CPM and PERT).
- Sequencing problem.
- Dynamic programming.

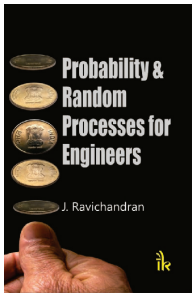
A very comprehensive and accessible approach in the presentation of the material/A variety of solved examples to illustrate the theoretical results/A large number of unsolved exercises for practice at the end of each section/Solutions to all unsolved examples are given at the end of each exercise.

Contents:

Introduction to Optimization/Linear Programming Problem/Duality in Linear Programming/Sensitivity Analysis/Transportation and Assignment Problems/Integer Linear Programming and Travelling Salesman Problem/Dynamic Programming/Game Theory/Classical Optimization Techniques/Non-Linear Programming/Networking/Linear Goal Programming/Sequencing/Index.

Audience –Engineering/Science and Management students at graduate and postgraduate level

Probability & Random Processes for Engineers



J. Ravichandran

ISBN: 978-93-84588-00-7/Year 2015
Size 16 cm × 24 cm/Pages 312
Paperback/₹ 455.00

Probability and Random Processes for Engineers is recommended as a textbook for the courses related to Probability and Random Processes for engineering students at both graduate and postgraduate levels. The book contains nine chapters that are well organized and presented in order as the contents progress from one topic in one chapter to another topic in the proceeding chapters. In addition, there are appendixes

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

that help in knowing some of the derivations for the results used in the text. Clearly, the book is user friendly, as it explains the concepts with suitable examples and graphical representations before solving problems.

Since the concepts of random processes are built upon the concepts of probability and statistics, one entirely dedicated chapter for the topics on probability and statistics is included in this book.

Salient Features:

- Full important probability concepts and distributions
- Multivariate normal distribution
- Concepts of random processes
- Stationarity of random processes
- Autocorrelation and its properties
- Standard distribution-based special processes
- Markov process and Marko chains
- Explanations with suitable examples and graphical representations
- Solved problems with illustrations for easy understanding
- More than 200 problems in total
- 100 solved examples
- 100 exercise problems with answers
- A number of graphs

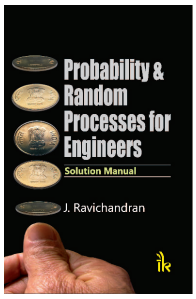
Contents:

An overview of random variables and probability distributions/ Introduction to random processes/Stationarity of random processes/ Autocorrelation and its properties/Binomial and poisson processes/ Normal process (Gaussian process)/Spectrum estimation: ergodicity/ Power spectrum: power spectral density functions/Markov process and Markov chain

Audience – B.Tech and B.E. M. Tech. M.E. and M.Sc (Mathemahtics and Statistics) student.

Probability & Random Processes for Engineers

Solution Manual



J. Ravichandran

ISBN: 978-93-84588-11-3/Year 2015
Size 16 cm × 24 cm/Pages 92
Paperback/₹ 165.00

This solution manual contains answers to the exercise problems given in each of the chapters of *"Probability and Random Processes for Engineers"*. Most of the problems given in this solution manual are different from those considered in the solved problems. Since many of the exercise problems are difficult in nature, each problem is solved by explaining each and every step in a way that the readers can easily understand. Since these problems are given in addition to the solved problems in the text, the readers can benefit from nearly 200 problems with solutions in total. While teachers can experience the feel of variety of problems with solutions, this helps students to prepare well for the examinations with confidence as well.

Contents:

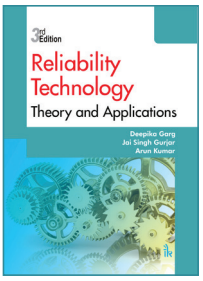
An overview of random variables and probability distributions/ Introduction to random processes/Stationarity of random processes/ Autocorrelation and its properties/Binomial and Poisson processes/ Normal process (Gaussian process)/Spectrum estimation: Ergodicity/ Power spectrum: power spectral density functions/Markov process and Markov chain

Audience – B.Tech and B.E. M. Tech. M.E. and M.Sc (Mathemahics and Statistics).

Reliability Technology

Theory and Applications

Third Edition



Deepika Garg • Jai Singh Gurjar
Arun Kumar

ISBN: 978-93-90620-47-0/Year 2021
Size: 18 cm × 24 cm/Pages 232
Paperback/₹ 325.00

"Reliability Technology: Theory and Applications" discusses the theoretical and technical aspects in the field of reliability engineering. It elaborates the system modeling and solution techniques in a systematic and understandable manner for complex systems. The purpose of this book is to present an integrated approach for the evaluation of reliability, maintainability, and availability analysis. This book is for those who are interested in the acquisition of fundamental/advanced knowledge of the theoretical/ practical aspects of reliability. It will also be helpful for those who are interested in pursuing a career in reliability engineering. Almost all types of complex systems are discussed.

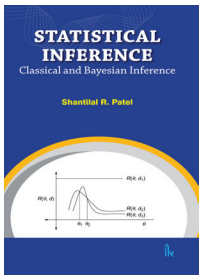
Contents:

Introduction/Probability, Probability Distribution and Stochastic Process/Important Concepts in Reliability Study/System Modeling and Solution Techniques/Reliability Analysis Some Electrical-Electronics, Telecommunicati/on and Mechanical Systems/Reliability Technology in Process Industries/Reliability Technology Applied to Agro-based Industries/Availability Analysis of a Biogas Plant and a Plant Pathological System/Bibliography/Index

Audience – B.Sc/M.Sc Mathematics.

Statistical Inference

Classical and Bayesian Inference



Shantilal R. Patel

ISBN: 978-93-90620-06-7/Year 2021
Size: 18 cm × 24 cm/Pages 424
Paperback/₹ 625.00

This book is meant for BSc, BSc (Honors), and MSc students offer statistics as a primary subject. The book is very different from the existing books in many ways. Apart from regular topics covered in the Statistical Inference course, it also covers some of the author's research work. The book includes eleven chapters, out of which five chapters are on the theory of estimation, and the remaining are on testing of hypotheses. The purpose of this book is to give up–to–date exposition of Statistical Inference with less rigorous treatment on mathematics, giving realistic illustrations and simple proofs of the theorems so that the readers may easily understand it.

Salient features

- Theory of Estimation and Testing of Hypotheses.
- Numerous solved examples to understand the underlying theories.
- Exercises at the end of each chapter.
- Simple proof of the results with implications and remarks are given.

Contents:

Sufficiency and Completeness/Unbiased Estimations/Efficiency of Estimator/Criteria and Methods of Estimation in Large Sample/ Decision Theory/Basic Principles of Testing of Hypotheses/Neyman

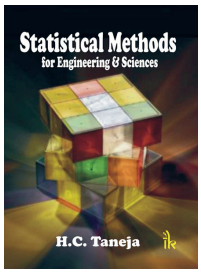
Theory/Unbiased Tests/Similar Tests/Sequential Probability Ratio Test (SPRT) and Likelihood Ration Test (LRT)/Non – Parametric Methods/UMP Tests for Truncated Distributions/Asymptotic Tests for Several Exponential Family of Distribution/Asymptotic Tests for Several Truncated Distributions/Appendix/References/Index

Audience – BSc Maths, BSc Maths (Honors), BSc Statistics.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

4435-36/7, Ansari Road, Daryaganj, Delhi - 110 002, INDIA

Statistical Methods for Engineering and Sciences



H. C. Taneja

ISBN: 978-93-80026-66-4/Year 2009
Size 18 cm × 24 cm/Pages 368
Paperback/₹ 565.00

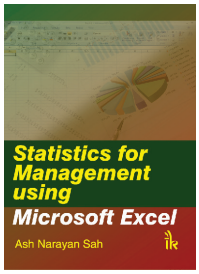
The text, divided in Chapters 1-12, has been designed for a course on statistical methods for students in engineering, mathematics, statistics, economics and natural sciences. Topics have been introduced and developed in a manner to help the readers for a hassle-free study. Each chapter includes a vast collection of examples, review exercises, and a problem set along with the answers. The book can be adopted for either a one- or two-semester course on statistical methods and applications.

Contents:

Descriptive Statistics/Elements of Probability/Random Variables and Expectation/Special Discrete Probability Distributions/Special Continuous Probability Distributions/Correlation and Regression/Sampling Distributions and Large Sample Estimation/Exact Sampling Distributions and Small Sample Testing/Analysis of Variance/Statistical Quality Control/Acceptance Sampling/Stochastic Processes/Appendix/References/Index.

Audience – Postgraduate and undergraduate engineering students.

Statistics for Management Using Microsoft Excel



A. N. Sah

ISBN: 978-93-81141-98-4/Year 2013
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 525.00

Statistics for Management using Microsoft Excel caters to the requirements of MBA students. The aim is to provide clear cut knowledge of various statistical tools using Microsoft Excel. Moreover, this book will also be useful for researchers, practitioners and other undergraduate and postgraduate courses of various institutes and universities.

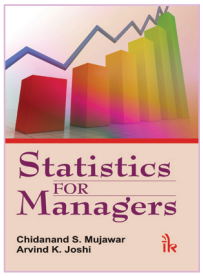
Today, managers must know how to convert data into information. This skill extends beyond the computation of statistics. The requirement of the business world is a book which not only gives statistical concepts but also its applications to the real world. Statistics is increasingly becoming a tool for analysis for marketing managers, financial analysts, economists, and others. The book has interpretation and decision making with the help of statistics at the forefront. The prime objective of this book is to describe how to use Microsoft Excel for statistical analysis in a step-by-step method.

Contents:

Overview of Statistics/Descriptive Statistics/Probability/Random Variable and Probability Distributions/Sampling and Sampling Distribution/Estimation and Confidence Interval/Hypothesis Testing /Chi-Square Test and Analysis of Variance/Time Series Forecasting and Index Numbers/Correlation Analysis/Simple Linear Regression Model/Multiple Linear Regression Model/Non-parametric Methods/Index

Audience – Business Statistics, Econometrics, Forecasting & Research Methodology.

Statistics for Managers



Chidanand S. Mujawar • Arvind K. Joshi

ISBN: 978-93-81141-45-8/Year 2011
Size 18 cm × 24 cm/Pages 290
Paperback/₹ 345.00

Statistics for Managers is a comprehensive text for the students of MBA. This book provides an exhaustive understanding of statistics. Statistical language has been made easier with the help of numerous review questions and graded exercises.

The topics included are Statistics, Probability, Sampling Distribution, Testing of hypothesis and Inferences.

Salient Features:

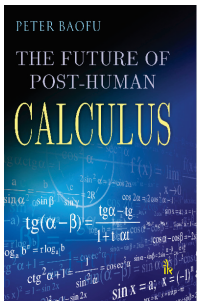
- Each topic is treated in a systematic and logical manner.
- Variety of solved problems in each unit.
- Each unit has a separate question bank with multiple-choice problems.
- Several worked out examples are drawn from various examination papers of reputed universities.

Contents:

Introduction to Statistics/Measures of Central Tendency/Measures of Dispersion/Correlation and Regression/Time Series Analysis and Index Numbers/Probability/Sampling Theory/Testing of Hypothesis/Index

Audience – Business Management students.

The Future of Post-Human Calculus



Peter Baofu

ISBN: 978-93-84588-71-7/Year 2015
Size 16 cm × 24 cm/Pages 680
Hardback/₹ 4225.00

"This seminal project will fundamentally change the way that we think about calculus in relation to differentials and integrals from the combined perspectives of the mind, nature, society, and culture, with enormous implications for the human future and what I originally called its *post-human* fate." —Author

This is a milestone book on calculus, in which the author exposes the reader to the definition and history of calculus, branching into integrals and differentials, its diverse aspects, the debates, arguments and controversies surrounding it, its diverse aspects and so on; then selectively picks up the dialectic relationship between differentials and integrals; and goes on to synthesize an entirely new body of knowledge which is *unheard* of today—The *Conversional Theory of Calculus* (TCTC). Indeed this work can be called "beyond differentials and integrals" which according to the author beholds the future of number theory.

This brand *new* TCTC comprises forty-one major theses, encompassing the broad relations to method, structure, process, agency and outcome. The author has dissected the dialectic contexts of differentials and integrals from the perspectives of the mind, nature, society and culture, which pave the way for further enquiry and the need to transcend them, finally leading to the eventual postulation of the TCTC theses.

With the approach, focus and the subject matter per se, this book will attract the inquisitive minds of those who have interest in areas as diverse as science, engineering, economics, algebra, geometry, mathematical analysis, heuristics, population dynamics, finance, physics, non-standard analysis, differential ecology, medicine, topology, logic, cosmology, and so on, besides calculus.

Contents:

Part One: Introduction: Introduction—The Application of Calculus

Part Two: Differentials: Differentials and Their Duality

Part Three: Integrals: Integrals and Their Doubleness

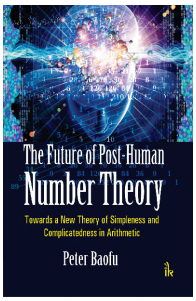
Part Four: Conclusion: Conclusion—The Future of Calculus

Audience – Academics and Researchers in Mathematics.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

The Future of Post-Human Number Theory



Peter Baofu

ISBN: 978-93-84588-55-7/Year 2015
Size 16 cm × 24 cm/Pages 710
Hardback/₹ 4225.00

"This seminal project will fundamentally change the way that we think about number theory (in relation to simpleness and complicatedness in arithmetic) from the combined perspectives of the mind, nature, society, and culture, with enormous implications for the human future and what I originally called its *post-human* fate."

—Author

This is a milestone book on number theory, in which the author exposes the reader to the importance of number theory, the historical debates and controversies surrounding it, its diverse aspects and so on; then selectively picks up the dialectic relationship between simpleness and complicatedness; and goes on to synthesize an entirely new body of knowledge which is unheard of today—*The Transmutative Theory of Numbers* (TTTN). Indeed this work can be called as "beyond simpleness and complicatedness" which according to the author beholds the future of number theory.

This brand *new* TTTN comprises forty-four major theses, encompassing the broad relations to method, structure, process, agency and outcome. The author has dissected the dialectic contexts of simpleness and complicatedness from the perspectives of the mind, nature, society and culture, which pave the way for further enquiry and the need to transcend them, finally leading to the eventual postulation of the TTTN theses.

With the approach, focus and the subject matter per se, this book will attract the inquisitive minds of those who have interest in areas as diverse as history, logic, pure mathematics, applied mathematics, mathematical logic, algebra, geometry, analysis, computer science, analytic number theory, physics, engineering, natural science, philosophy of mathematics, mathematical cognition, algebraic number theory, probabilistic number theory, arithmetic combinatorics, ethnomathematics, and so on.

Contents:

Part One: Introduction: Introduction—The Importance of Number Theory

Part Two: Simpleness: Simpleness and its Doubleness

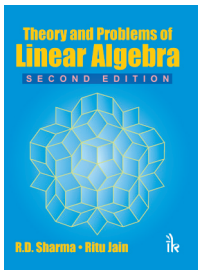
Part Three: Complicatedness: Complicatedness and its Ambivalence

Part Four: Conclusion: Conclusion—The Future of Number Theory

Audience – Academicians and Researchers in Mathematics.

Theory and Problems of Linear Algebra

Second Edition



R.D Sharma • Ritu Jain

ISBN: 978-93-80578-86-6/Year 2010
Size 18 cm × 24 cm/Pages 784
Paperback/₹ 595.00

Theory and Problems of Linear Algebra has been designed to cater to the need of students opting Linear Algebra as a subject at undergraduate and postgraduate levels in various Indian universities. The book exhaustively covers the subject matter and its applications in various fields.

To understand the subject matter covered in the book, reader must be aware of some basic concepts of abstract algebra. These prerequisites have been covered in Chapter-0. The subject matter has been graded in such a systematic manner that the knowledge of topics covered in each chapter is a prerequisite to understand the topics covered in the chapters to follow:

Chapter 1 deals with modules and emphasis has been given to module morphisms, cyclic modules, free modules and notherian modules.

Chapter 2 is an extension of chapter 1, when ring is replaced by a field. Linear independence and dependence of vectors have been discussed.

In **Chapter 3**, vector space homomorphisms, widely known as linear transformation, have been discussed.

Chapter 4 deals with relations between linear transformations between finite dimensional vector spaces and matrices.

In **Chapter 5**, concept of the determinant of a square matrix have been introduced and various properties of determinants have been discussed.

Inner product spaces, unitary spaces and linear operators on them have been discussed in detail in the next four chapters (Chapter 6 to Chapter 9). Bilinear forms and associated quadratic forms have been explained in chapter 10.

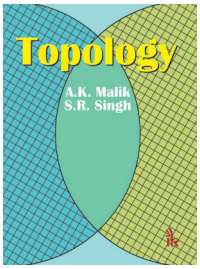
The book will not only serve as a text book for a formal course in linear algebra but also as a supplement to standard texts in linear algebra and will also be helpful to all readers irrespective of their fields of specification.

Contents:

Priliminary Concept/Modules/Vector Spaces/Linear Transformations/Linear Transformations and Matrices/Determinants/Inner Product Spaces/Linear Operators on Inner Product Spaces/Unitary Spaces/Operators on Unitary Spaces/Bilinear and Quadratic Forms

Audience – Undergraduate and Postgraduate students.

Topology



S R Singh • A K Malik

ISBN: 978-93-81141-89-2/Year 2012
Size 18 cm × 24 cm/Pages 248
Paperback/₹ 425.00

This book is designed to meet the requirements of Topology course of graduate and postgraduate students.

It is also suitable as a reference book for research scholars as well as for specialists working in topology optimization.

Salient Features:

- Each chapter is provided with relevant exercises at the end of the topic.
- Each topic is treated in systematic, logical and lucid manner.
- Concepts are introduced sequentially with detailed explanations and illustrations.
- Fully worked out examples and graded exercises aimed at preparing the student for examination as well as higher studies.

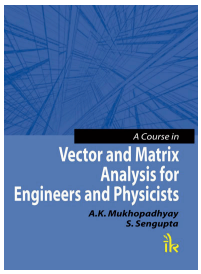
The book is amply illustrated with various methods to solve particular problems. Questions from earlier examination papers of various universities like, BITS, CCS, VU, GKV, DU, etc., are also included as examples and worked out examples.

Contents:

Introduction/Elementary Concepts/Metric Spaces/Topological Spaces/Bases and Sub-bases/Continuous and Homeomorphism/Seperation Axioms/Connectedness/Compactness/Homotopy and Homology/Index

Audience – B.E. & B. Tech.

A Course inVector and Matrix Analysis for Engineers and Physicists



A.K. Mukhopadhyay
S. Sengupta

ISBN: 978-93-80578-02-6/Year 2010
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 435.00

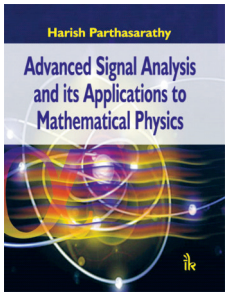
With the advancement of technology and general science, the applications of Mathematics are becoming more and more extensive requiring an in-depth knowledge of different mathematical tools. This volume introduces students of Engineering and Physics to those areas of Mathematics which, from a modern point of view, seem to be very important in connection with practical problems. Almost all the chapters contained in the book deal with various aspects and applications of vectors and matrices. The applications have established them as important tools for solving physical and engineering systems.

Contents:

Vector Fundamentals/Product of Vectors/Vector Calculus/Gradient, Divergence and Curl of Vectors/Line Integral, Surface Integral and Volume Integral of Vector Fields/The Divergence Theorem/Stoke's Theorem and Green's Theorem/Matrix Fundamentals/Matrix Product/ Matrix Inversion/Rank of a Matrix and Elementary Transformations/ Linear and Simultaneous Linear Equations/Characteristic Equation, Eigenvalues and Eigenvectors/Index.

Audience – B.Tech., UG Engineering & Physics students.

Advanced Signal Analysis and its Applications to Mathematical Physics



Harish Parthasarathy

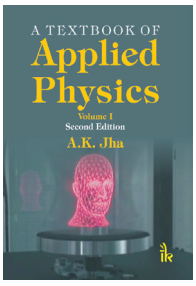
ISBN: 978-93-80026-54-1/Year 2009
Size: 21 cm × 28 cm/Pages 710
Hardback/₹ 1995.00

(See on page 66)

A Textbook of Applied Physics

Volume - I

Second Edition



A.K. Jha

ISBN: 978-93-84588-51-9/Year 2015
Size 18 cm × 24 cm/Pages 422
Paperback/₹ 455.00

This book is intended to serve as a textbook of applied physics/ Physics paper of the undergraduate students of B.E., B. Tech and B.Sc. Exhaustive treatment of topics in optics, mechanics, relativistic mechanics, laser, optical fibres and holography have been included. Physics is best learnt by conceptualization of the involved principles and to help the students conceptualize the involved principles, the text has been presented in an easy to understand manner. Large number of solved numericals have been included in the book to give a quantitative idea of the subject. Exercises and unsolved numericals have been given at the end of each chapter for practice. The book will also be useful for the students taking various competitive examinations.

Contents:

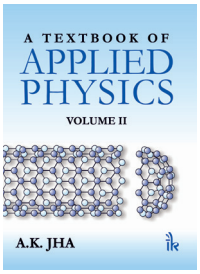
Unit I : Interference of Light/Diffraction of Light
Unit II : Polarization of Light/Optical Instruments
Unit III: Laser/Fibre Optics/Holography
Unit IV : Mechanics/Wave Motion
Unit V : Relativity

Audience – Undergraduate students of B.E., B.Tech and B.Sc.

A Textbook of Applied Physics

Volume II

Second Edition



A.K. Jha

ISBN: 978-93-81141-76-2/Year 2012
Size 18 cm × 24 cm/Pages 412
Paperback/₹ 455.00

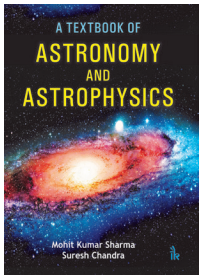
This book is meant to serve as a textbook of Physics for the undergraduate students of science and engineering. Exhaustive treatment of topics in quantum mechanics, statistical mechanics, nuclear physics, electromagnetic theory, X-rays production, properties and applications and ultrasonics and accoustics of buildings have been presented. These topics have been presented in easy to understand and simple language. Large number of solved numericals have been included to give a quantitative idea of the subject. Short and long answer type questions and unsolved numericals have been given at the end of each chapter for practice.

Contents:

Quantum Physics/Statistical Mechanics/Nuclear Physics/Electro-magnetic Theory/X-rays Production and Properties/Physics of Semiconductors/Dielectric, Ferroelectric and Piezoelectric Properties of Materials/Superconductivity/Nanomaterials/Index

Audience – Undergraduate students of B.E., B.Tech and B.Sc.

A Textbook of Astronomy and Astrophysics



Mohit Kumar Sharma
Suresh Chandra

ISBN: 978-93-86768-49-0/Year 2019
Size: 18 cm × 24 cm/Pages 361
Paperback/₹ 475.00

Astronomy & Astrophysics is a subject which attracts people of all ages; from a school going student to a person enjoying superannuation. The text deals with the fundamentals of Astronomy and Astrophysics. After briefing about the beginning of Astronomy, we have discussed various coordinate systems used to specify position of a place on the earth and an object in the space. Time is an important parameter and can help in having information about the relative occurrences of various events. The limitations of the observations with our eyes can be largely extended with the help of telescopes. Further, the telescopes help us for making observations of those radiations which cannot be seen by human eyes.

The fundamentals used for the study of various phenomena are summarized. Details about the Sun the closest star, has been studied in detail. Information about the solar family is described at length. Thermochemical reactions are responsible for creation of energy in the shining objects. Information about various types of thermochemical reactions is incorporated. Details of the galaxies and the universe are discussed. A brief description about the Cosmology — the science about the formation of universe is mentioned. The text cannot be considered as complete in absence of a discussion about the possibility of the existence of life in the universe other than that on the Earth.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Salient Features:

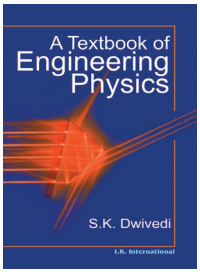
- Large number of cosmic phenomena are covered
- Each topic is self-explanatory and self-contained
- Topics are supported by examples.
- No prior-knowledge of Astronomy & Astrophysics is required

Contents:

Beginning of Astronomy/Coordinate Systems/Time/Telescopes and Detectors/Fundamentals/Stars/Sun/Solar System/Nucleosynthesis/Galaxies and Universe/Cosmic Distance Ladder/Cosmology/Life in the Universe/Appendices/Index

Audience – Astronomy & Astrophysics courses.

A Textbook of Engineering Physics



S.K. Dwivedi

ISBN: 978-81-89866-47-1/Year 2007
Size 14 cm × 21.5 cm/Pages 290
Paperback/₹ 325.00

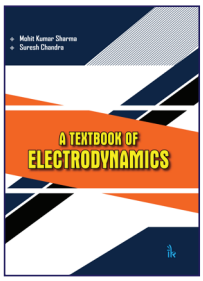
This book meets the requirement of undergraduate students. Although there are several books on Engineering Physics, most of them are bulky and written by foreign authors. Most of these books are not suitable for the students of Indian Universities. The subject matter in this book has been introduced in a very lucid style so that the students may find it interesting. There is profusion of illustrative examples of variety everywhere in the book. These examples are followed by graded sets of exercises.

Contents:

Unit 1 Relativistic Mechanics/**Unit 2** Interference & Diffraction/**Unit 3** Polarization & Laser/**Unit 4** Electromagnetics & Magnetic Properties and Materials/**Unit 5** X-rays & Wave Mechanics.

Audience – Undergraduate engineering students.

A Textbook of Electrodynamics



Suresh Chandra
Mohit Kumar Sharma

ISBN: 978-93-90620-68-5/Year 2022
Size: 18 cm × 24 cm/Pages 426
Paperback/₹ 625.00

One of the core subjects in Physics, Electrodynamics is taught to graduate and postgraduate students. In this book, MKS system has been adopted and tensor algebra is not used, so that the presentation of each topic is at the level of a common student. After explaining the fundamentals of Mathematics, it discusses the electrostatics, electrostatic field in dielectrics, energy in electrostatic fields, magnetostatics, electromagnetic induction, Maxwell's field equations, dispersion and scattering, electromagnetic waves, waveguides and antennas, retarded systems, principle of relativity, charged particle in fields, plasma state, and waves in fluid plasma.

Salient Features:

- Covers the syllabus of most of the universities in India and abroad.
- Language is simple and reader friendly.
- Each topic is evolved from the ground level.
- Topics are supported by the examples for better and clear understanding.
- Terms are explained with the help of footnotes, as per need.

Contents:

Curvilinear Coordinates/Vectors/Electrostatics/Electrostatic Field in Dielectrics/Energy in Electrostatic Fields/Magnetostatics/Electromagnetic Induction/Maxwell's Field Equations/Dispersion and Scattering/Electromagnetic Waves/Wave-guides and Antennas/Principle of Relativity/Retarded Systems/Charged Particle in Fields/Plasma State/Waves in Fluid Plasma/Appendices/Bibliography/Index

Audience – B.E & B.Tech students of Electrodynamics.

An Introduction to Equilibrium Statistical Mechanics



Palash Das

ISBN: 978-93-81141-25-0/Year 2012
Size 18 cm × 24 cm/Pages 386
Paperback/₹ 475.00

This book presents principles, basic concepts and applications of Statistical Mechanics.

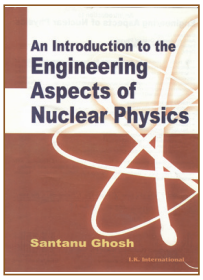
The standard undergraduate syllabus in Physics includes an introductory course in Statistical Mechanics, whereas the postgraduate course in Statistical Mechanics is much more extensive in scope. This book is intended for both categories of students. Students often find it difficult to solve problems on Statistical Mechanics. So for their convenience, a sufficient number of solved problems are incorporated in each topic. In fact around 138 solved problems are given in this book.

Contents:

Basis of Statistical Mechanics/Elements of Ensemble Theory/Classical or Maxwell-Boltzmann Statistics/Foundation of Quantum Statistics/Fermi-Dirac Statistics/Bose-Einstein Statistics/Interacting Classical Systems: The Method of Cluster Expansion/Introduction to Phase Transition/Appendices/Index

Audience – Graduate and Postgraduate students of Statistical Mechanics.

An Introduction to the Engineering Aspects of Nuclear Physics



Santanu Ghosh

ISBN: 978-93-80026-00-8/Year 2009
Size 16 cm × 24 cm/Pages 184
Paperback/₹ 315.00

This book is meant for those opting for courses where knowledge of applications of nuclear physics is required and also to the people involved in application oriented fields of nuclear physics. This book includes major applications of nuclear physics, such as detector technology, nuclear power, activation analysis, and applications to biology. Students, learning engineering aspects of physics, which is an upcoming course of study in various institutes will find the book useful.

Broadly the book includes:

- Basics of nuclear physics.
- Interaction of radiation with matter.
- Different radiation detection systems.
- Different nuclear reactions.
- Nuclear reactor designing.
- Methodology of radiocarbon dating.
- The activation analysis techniques.
- Neutron activation analysis.
- Effect of radiation on biological substances.

Contents:

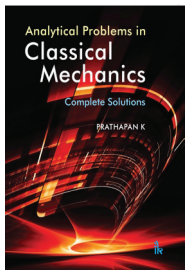
Basic Properties of Nucleus/Interaction of Radiation with Matter/Nuclear Detectors/Nuclear Reaction: Fission and Fusion/Nuclear

Reactors/Radioactive Dating/Activation Analysis Nuclear Radiation in Biology and Medicine/Index.

Audience – Students undertaking courses in nuclear physics and also professionals involved in application oriented fields of nuclear physics.

Analytical Problems in Classical Mechanics

Complete Solutions



Prathapan K

ISBN: 978-9386768-18-6/Year 2019
Size 18 cm x 24 cm/Pages 526
Paperback/₹ 675.00

In the book, each formulation of classical mechanics is divided into different chapters and theory notes are given at the beginning of each chapter. Most of the classical problems are discussed in detail for understanding the applications of various formulations. Some problems are discussed in all formulations which will help the reader to make a comparison among various formulations. A large number of problems are selected from various university examinations as well as from competitive examinations like NET, JEST, GATE and Civil Service. This book will also be helpful to the students preparing for such examinations. Also, a large number of practice problems are given at the end of each chapter.

Salient Features:

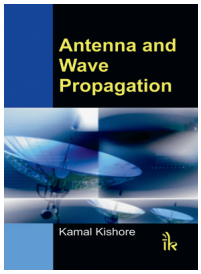
- Application of various formulations of classical mechanics.
- Theory notes.
- Problems discussed in all formulations.
- Classical problems with applications of various formulations.

Contents:

Foundations of Mechanics/Lagrangian Formulation/Hamiltonian Formulation/Canonical Transformation and Poisson Brackets/Hamilton – Jacobi Formulation and Action – Angle Variables/Small Oscillations/Scattering and Rigid Body Dynamics/Index

Audience – PG and UG students, competitive examinations like NET, JEST, GATE and Civil Services.

Antenna and Wave Propagation



Kamal Kishore

ISBN: 978-93-80026-06-0/Year 2009
Size 16 cm × 24 cm/Pages 288
Paperback/₹ 325.00

The aim of this book is to give an introduction to the fundamental principles of antennas and wave propagation. Unlike other books available there is more emphasis on mathematical explanation in addition to physical understanding. Physical principles are explained in detail with neat diagrams to support the theory.

Spread in 8 chapters the book deals with:

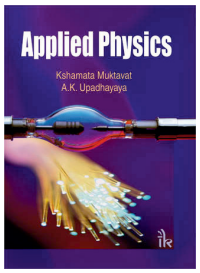
Brief introduction to electromagnetic waves/Physical understanding of radiation mechanism/Parameters associated with antenna, directivity, gain, radiation pattern etc./Various types of antenna including dipole, linear antenna antenna arrays and aperture antennas./Physical mechanism of various types of propagations processes

Contents:

Review of Electromagnetic Waves/Physical Concept of Radiation/Antenna Fundamentals/Linear Wire Antennas/Antenna Arrays/Aperture Antennas/Ground Wave Propagation/Ionospheric Propagation/Bibliography/Index.

Audience – UG Electronics and Physics courses.

Applied Physics



Kshamata Muktavat
A.K. Upadhyaya

ISBN: 978-93-80578-00-2/Year 2010
Size 18 cm × 24 cm/Pages 648
Paperback/₹ 565.00

This book is mainly intended the readers in the applied version of physics. Besides meeting the requirement of the syllabus of B. Tech., it will meet the requirement of the syllabus of various technical universities. The lucid and interesting presentation of the subject with good and illustrative examples will fulfill the quest of knowing physics better.

Contents:

Unit-I: Interference/Diffraction/Polarization/Optical Fiber/Central Forces/Harmonic Oscillations/Special Theory of Relativity/Laser/Optical Instruments

Unit-II: Electromagnetic Theory/Quantum Theory/Statistical Mechanics/Semiconductor Physics/Superconductivity/X-rays/Ultrasonics

Appendix A: Kronig-Penney Model

Appendix B: Density of States for Electrons in Solids

Appendix C: Electromagnetic Spectrum

Appendix D: SI Units and Prefixes

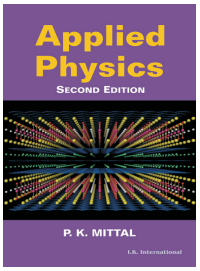
Appendix E: Standard Constants

Index.

Audience – B.E. and B.Tech. students.

Applied Physics

Second Edition



P.K. Mittal

ISBN: 978-81-89866-72-3/Year 2008
Size 16 cm × 24 cm/Pages 416
Paperback/₹ 445.00

The book is designed for the first year engineering students. The salient features of the book are:

- It covers all the topics of the prescribed syllabus.
- The different concepts and propositions are developed in terms of simple physical phenomenon supplemented with theoretical derivations in a concise and explanatory manner.
- A set of solved examples are given at the end of each chapter.
- At the end of each chapter, a set of review questions, numerical questions and objective-type questions have been given.

Contents:

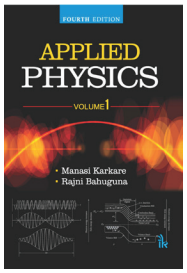
Bonding in Solids/Cyrstal Structure/Planes in Cyrstals/Cyrstal Diffraction/Defects and Dislocations in Cyrstals/Principles of Quantum Mechanics/Electron Theory of Metals/Dielectric Properties/Magnetic Properties/Semiconductors/Superconductivity/Lasers/Fibre Optics/Index.

Audience – First year engineering students of all branches.

Applied Physics

Volume 1

Fourth Edition



Manasi Karkare
Rajni Bahuguna

ISBN: 978-93-85909-49-8/Year 2017
Size 16 cm × 24 cm/Pages 240
Paperback/₹ 355.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Applied Physics-Vol 1 has been written keeping in mind First Year Engineering Students of Four Year Degree Course (B.E./B.Tech.). This book will develop interest in the subject of Applied Physics and students can look forward for securing higher and better scores.

Salient Features:

- Each topic begins with an Introduction in a simple and easy to understand language.
- More illustrative diagrams and examples help in better understanding.
- Contains numerous solved problems along with assignment problems.
- Summary, list of formulae, questions with answers and exercise for practice is included at the end of each chapter.

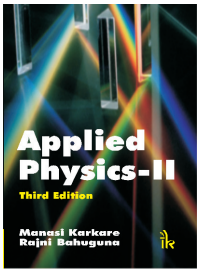
Contents:

Crystal Structure/Quantum Mechanics/Semiconductor Physics/ Superconductivity/Acoustics/Ultrasonics/

Audience: B.E./B.Tech (Applied Physics)

Applied Physics-II

Third Edition



Manasi Karkare
Rajni Bahuguna

ISBN: 978-93-82332-22-0/Year 2013
Size: 16 cm × 24 cm/Pages 248
Paperback/₹ 325.00

Applied Physics-II is meant for the first year engineering students of the Mumbai University.

Salient Features:

- Beginning each topic with its introduction, it is written in self-explanatory easy language.
- Appropriate and illustrative diagrams wherever necessary.
- Numerous solved problems along with assignment problems.
- List of formulae, questions with answer and exercise are included in each chapter.

Contents:

Interference and diffraction of light/Fibre optics and lasers/Quantum mechanics/Motion of charged particle in electric & magnetic fields/ Superconductivity/Nanoscience and /Index

Audience – Undergraduate students of B.E., B.Tech and B.Sc.

Astronomy and Astrophysics

Second Edition



Mohit Kumar Sharma
Suresh Chandra

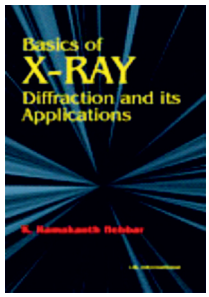
ISBN: 978-93-90620-92-0/2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

Astronomy & Astrophysics is a subject which attracts people of all ages; from school-going students to a person enjoying superannuation. The text deals with the fundamentals of Astronomy and Astrophysics from the origin to recent developments. In this new edition of the book, new chapters on Atomic Spectra, Molecules in Interstellar Medium and Waves in Fluid Plasma have been included. The book is a textbook for courses on Astronomy and Astrophysics.

Salient Features:

- All topics are supported by examples
- Astronomy in Mahabharata and Ramayana included in this new edition
- Large number of cosmic phenomena are covered
- Language is lucid

Basics of X-ray Diffraction and Its Applications

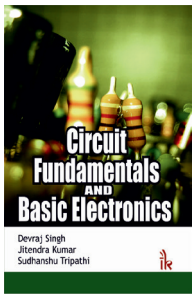


K. Ramakanth Hebbar

ISBN: 978-93-81141-54-0/Year 2012
Size 16 cm × 24 cm/Pages 276
Paperback/₹ 175.00

(See on page 120)

Circuit Fundamentals and Basic Electronics



Devraj Singh
Jitendra Kumar
Sudhanshu Tripathi

ISBN: 978-93-82332-57-2/Year 2014
Size 18 cm × 24 cm/Pages 456
Paperback/₹ 525.00

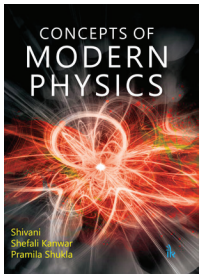
The present book is designed to meet the requirements of B.Sc., B.E. and A.M.I.E. students. It will also be useful for the students taking various competitive examinations. The book divided in 5 units and 15 chapters deals with the basic concepts of circuit fundamentals and basic electronics. The first three chapters cover the topics related to Circuit Fundamnetals whereas the last 12 chapters cover the topics related to Basic Electronics. The topics have been presented in systematic, logical and lucid manner and explained with the help of solved examples. Miscellaneous solved numerical problems are given at the end of each chapter for practice. Short and long answer type questions, unsolved numerical and multiple choice questions have been given at the end of each chapter for practice.

Contents:

Variying Currents/Bridge Measurements/Electrical Networks/ Semiconductors Physics and PN Junction Diode/Rectifiers, Filters and Power Supply/Bipolar Junction Transistors/Transistor Biasing and Circuits/Amplifiers/Multistage Transistor Amplifiers/Oscillators/ Modulations and Demodulation/Measuring Instruments/Field Effect Transistors/Digital Electronics/Miscellaneous Topics

Audience – B.Sc., B.E. and A.M.I.E. students

Concept of Modern Physics



Shivani
Shefali Kanwar
Pramila Shukla

ISBN: 978-93-86768-80-3 /Year 2020
Size: 18 × 24 cm/Pages 326
Paperback/₹ 345.00

This book is meant for the students of B.E., B. Tech., B.Sc., and A.M.I.E. students. It provides the fundamental concepts of Modern Physics through various applications. It provides step-by-step solutions of topics. A set of solved numericals, theoretical questions and numerical problems at the end of each chapter provides the students to understand each topic clearly. Important topics that have been included are length contraction, variation of mass with velocity, Compton effect, proof of Heisenberg's uncertainty principle, complementarity principle and Doppler effect.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Salient Features:

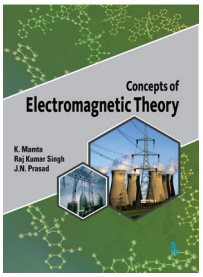
- Explanation of difficult and intricate topics with suitable diagrams.
- Presentation of fundamental concepts of Physics with simplified derivations of important formulae.
- Solved and unsolved numerical problems.
- Includes numerous exercises to understand particular topics so as to build up their problem-solving ability

Contents:

Theory of Relativity/Particle Properties of Matter/Wave Properties of Matter/Schrödinger's Equation and Its Simple Applications/X-Rays/Lasers/Structure of Atom/Nuclear Physics and Radioactivity/Study of Real and Ideal Gases/Index

Audience – B.E., B.Tech., B.Sc., and A.M.I.E. courses.

Concepts of Electromagnetic Theory



K. Mamta
Raj Kumar Singh
J.N. Prasad

ISBN: 978-81-948676-3-0/Year 2021
Size: 18 × 24 cm/Pages 392
Paperback/₹ 425.00

Concepts of Electromagnetic Theory is a useful resource on the electromagnetic theory for undergraduate students of science and various technical streams. The book covers a wide range of topics, viz., electrical field and potential, electrostatic boundary value problem, electrostatic field in dielectric medium, magnetostatics, magnetic fields in matter, Maxwell's equations, electromagnetic waves, polarization of electromagnetic waves and optical fibre. Understanding of electromagnetic theory is also required in the electromagnetic braking, coffee ring effect, Faraday's cage and communication systems.

Difficult mathematical steps have been simplified by including all the steps of calculation, using easy and comprehensible formulae and equations. Figures and illustrations are included to make the understanding of concepts, notations and representation easy and simple.

Salient Features:

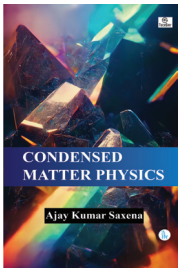
- Dedicated mathematical preview for better understanding
- Complete coverage of syllabus of AICTE and UGC-CBCS pattern
- Balanced approach to both theory and application
- Chapter-end summary, descriptive and multiple-choice questions
- Large number of solved and unsolved problems.

Contents:

Mathematical Preview/Electric Field & Potential/Electrostatic Boundary Value Problem/Electrostatics in a dielectric Medium/Magnetostatics/Magnetostatics in Magnetic Medium/Electromagnetic Induction/Maxwell's Equation/Electromagnetic Wave/Polarization of electromagnetic Waves/Rotatory Polarization/Optical Fiber/Transmission Line Waveguide and Antenna/Appendix: Physical Constants and Scientific Powers/Index

Audience – Graduate in Science stream.

Condensed Matter Physics



Ajay Kumar Saxena

ISBN: 978-93-90620-86-9/Year 2023
Size: 18 cm × 24 cm/Pages 1744
Paperback/₹ 1995.00

The book Condensed Matter Physics Strives to provide essential physics of the soft condensed matter and included many recent topics. The book has been divided into nineteen chapters. The book will be an important reading for the undergraduate, graduate students and researchers.

Salient Features:

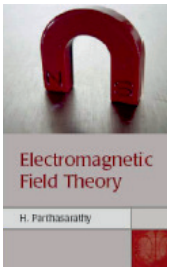
- A conceptual student-friendly approach;
- Includes Lasers and High Tc superconductivity;
- Nanophysics, Hartree and Hartree Fock Approximation and Density Functional Theory.

Contents:

Anatomy of Matter and Basic Idea About Materials/Solids and Crystal Structures/X-Ray Diffraction Reciprocal Lattice, Electron Diffraction and Microscopy/Bonding and Atoms Size/Order and Disorder, Imperfections, Alloys and Deformation/Lattice Vibrations and Lattice Dynamics/Basics of Thermodynamics, Statistical Physics and Boltzmann Transport Equation/Elastic Properties of Solids/Thermal Properties of Solids/Theory of Metals and Fermi Surfaces/Physics of Semiconductors/Band Theory and Energy – Band Structures/Magnetic Properties/Optical Properties/Superconductivity (Conventional and High TC)/Thermoelectric, Photovoltaic and Magnetoelectric Effects/Dielectrics, Ferroelectrics and Piezoelectrics/Lasers and Mössbauer Effect/ Born Oppenheimer, Hartree and Hartree – Fock Approximations (Reduction to One Electron Problem)/Nanostructures and Nanophysics/Index

Audience: Undergraduate and Graduate students of Physics

Electromagnetic Field Theory



H. Parthasarathy

ISBN: 978-81-88237-09-8/Year 2004
Size 14 cm × 22 cm/Pages 368
Paperback/₹ 395.00

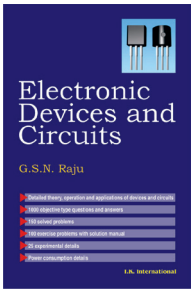
This is an introductory book on the subject of classical electromagnetic field theory but simultaneously carries the reader to a level from where he would be able to read more advanced textbooks on subjects like Jackson's Electrodynamics. The material for this book arose out of a one-semester course on electromagnetic theory, which the author delivered to fourth semester undergraduate students of electronics and communication engineering. The author's chief research interests have been on problems related to the formulation of boundary value problems in electromagnetics in terms of partial differential equations and their solution by numerical methods. The style in which the book has been written, i.e. laying more emphasis on physical principles rather than on engineering applications, sets it apart from most of the engineering textbooks on the subject.

Contents:

Basics of Vector Analysis/Electrostatics, Coulomb's Law and Gauss' Law/Ampere's Law and Magnetostatics/Faraday's Law of Induction/Maxwell's Equations and Electromagnetic Waves/Fundamentals of Quantum Mechanics.

Audience – Undergraduate Students of Electronics and Communication Engineering.

Electronic Devices and Circuits



G.S.N. Raju

ISBN: 978-81-89866-02-0/Year 2006
Size 16 cm × 24 cm/Pages 588
Paperback/₹ 445.00

Electronic Devices and Circuits contains the fundamentals of electronic devices and their applications. The book is centred around the basic characteristics, analysis, design and application aspects of conductors, insulators, semiconductors,

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

resistors, inductors, capacitors, basic network theorems, test and measuring meters, fabrication techniques, diodes, transistors, amplifiers and oscillators. The laboratory experiments related to all the important devices are also presented in it.

The fundamental concepts of the subject are described pointwise for easy readability and grasp. Several solved problems, objective-type questions and multiple-choice questions with answers, exercise questions with solution manual and a large number of worked out examples, besides 27 experiments conducted for all the engineering and science students are the highlights of the book. The entire content in the book is provided in a logical, orderly and a self-understandable manner.

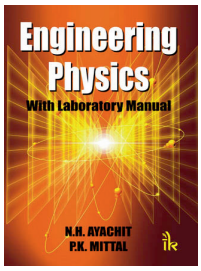
Contents:

Common Electronic Materials and Properties/Passive Components, DC Sources, Circuit Theorems and Basic Meters/Electrodynamics and CRO/Diode: Characteristics and Applications/Rectifiers and DC Power Supplies/Transistor Characteristics and Applications/Transistors Biasing and Stabilization Techniques/Analysis of Transistor Amplifiers Using Hybrid Equivalent Circuits/Field Effect Transistors/Feedback Amplifiers/Power Amplifiers/Power Devices/Oscillators/Operational Amplifiers and Applications/Experiments/Multiple Choice Questions/Index.

Audience – B.Sc./M.Sc. (Electronics) and B.Sc./M.Sc. (Physics), AMIETE, AMIE, Teachers, Circuits Designers, Scientists, Course on Semiconductor Electronic Devices and Circuits.

Engineering Physics

With Laboratory Manual



N.H. Ayachit
P.K. Mittal

ISBN: 978-93-80578-68-2/Year 2010
Size 16 cm × 24 cm/Pages 520
Paperback/₹ 425.00

The present book is designed for the first year engineering students. The salient features of the book are:

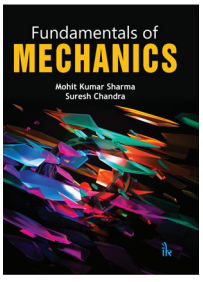
1. Various concepts and propositions are developed in terms of simple physical phenomenon supplemented with theoretical derivations in a concise and explanatory manner.
2. A set of solved examples are given at the end of each chapter.
3. At the end of each chapter, a set of review questions, numerical questions and multiple-choice questions have been given.
4. In the end of the book, Laboratory Experiments are included. These will guide the students for doing practicals, to learn the principles, rules and laws which are very useful in their future engineering studies.

Contents:

Unit one: Modern physics/**Unit two:** Quantum mechanics/**Unit three:** Electron conductivity in metals/**Unit four:** Dielectric and magnetic properties of materials/**Unit five:** Lasers/**Unit seven:** Crystal structure/**Unit eight:** Material science.

Audience – Graduate and postgraduate engineering students.

Fundamentals of Mechanics



Mohit Kumar Sharma
Suresh Chandra

ISBN: 978-93-86768-70-4/Year 2019
Size: 18 cm × 24 cm/Pages 384
Paperback/₹ 495.00

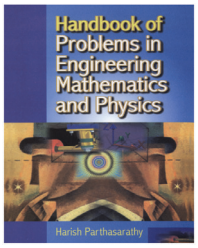
Mechanics is an important topic in the study of Physics, and is being taught in most of the universities in India as well as abroad to B.Sc., B.Tech and B.Sc. Hons students. This area of science deals with the behaviour of physical bodies when subjected to forces or displacements, and the subsequent effects of the bodies on their environment. Mechanics has origin in the ancient period. Scientists such as Galileo, Kepler and Newton laid the foundation of classical mechanics, which deals with the particles that are either at rest or are moving with velocities significantly less than the speed of light. Fundamentals of Mechanics discusses the Vectors, Laws of Motion, Conservation Laws, Inverse-Square-Law Forces, Harmonic Oscillator, Theory of Relativity, Non-inertial Reference Frames. Each topic is explained in a simple language and with the help of line drawings and exercises. Mathematical expressions are given as per need and are derived in a systematic and simple manner.

Contents:

Vectors/Laws of Motion/Conservation Laws/Inverse-Square-Law Forces/Harmonic Oscillator/Theory of Relativity/Non-inertial Reference Frames/Elasticity /Fluid Dynamics/Appendices/Index

Audience – B.Sc., B.Tech and B.Sc. Hons.

Handbook of Problems in Engineering Mathematics and Physics



Harish Parthasarathy

ISBN: 978-81-88237-23-4/Year 2005
Size 16 cm × 24 cm/Pages 826
Paperback/₹ 795.00

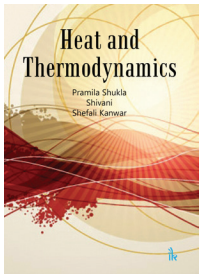
The book is intended to be a reference for selected problems in engineering mathematics and physics covering the fields of mechanics, fluid dynamics, signal processing, electromagnetic field theory and quantum mechanics. Many of the problems introduced in this book appear in the form of a bridge between two apparently disconnected topics. For example, the section on mechanics contains a section on linear algebra and another section on group representation with reference to image processing. The specialized techniques developed in one field very often find applications in other fields, and the collection of problems in this book illustrates this interplay. The book will be of equal use to mathematicians working on applied problems, to physicists interested in applying tools of signal analysis to their research and to signal processing experts who are looking for applications of signal processing methods to physical problems.

Contents:

Mechanics/Quantum Mechanics/Electrodynamics/Random Processes, Estimation and Filtering/Index.

Audience – UG and PG students of all disciplines of engineering.

Heat and Thermodynamics



Pramila Shukla
Shivani
Shefali Kanwar

ISBN: 978-93-86768-78-0/Year 2020
Size: 18 × 24 cm/Pages 340
Paperback/₹ 345.00

This book is designed for B.Sc., B.E. and A.M.I.E. students of all disciplines. It lays priority to the basic concepts of the topic with developing a profound conceptual base of heat and thermodynamics.

This book is a bridge between thermal physics and non-equilibrium physics. It contains both the basic theory and principles as well as topics like fundamental concepts of kinetic theory and transport phenomena, heat and thermodynamics, ideal gases, real gases, laws of thermodynamics and heat engines, entropy, black body radiation and laws of emission and absorption of radiation, thermodynamic relations and various phenomena of day-to-day life.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Salient Features:

- Covers syllabus of almost all universities.
- All concepts of heat and thermodynamics are supported with relevant diagrams for better and easy understanding.
- A large number of solved examples.
- Includes short, and long answer questions and numerical problems at the end of each chapter.

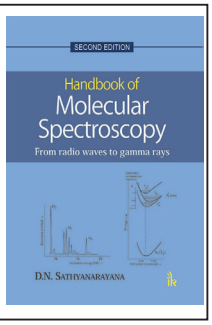
Contents:

Study of Ideal Gases and Thermodynamic Concept/Study of Real Gases and Properties of Pure Substances/Transport Phenomenon in Gases and Conduction of Heat/Basic Laws of Radiation/Concept of Heat, Zeroth and First Laws of Thermodynamics/Second and Third Law of Thermodynamics and Entropy/Thermodynamic Relations and Potentials/Change of State in Matter/Transportation of Heats/ Index

Audience – B.Sc., B.E. and A.M.I.E graduate students.

Handbook of Molecular Spectroscopy

Student's edition



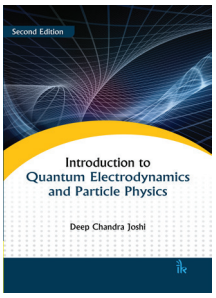
D.N. Sathyanarayana

ISBN: 978-93-86768-23-0/Year 2019
Size 18cm × 24 cm/Pages 650
Paperback/₹ 795.00

(See on page 124)

Introduction to Quantum Electrodynamics and Particle Physics

Second Edition



Deep Chandra Joshi

ISBN: 978-93-90620-76-0/Year 2022
Size 18 cm × 24 cm/Pages 668
Paperback/₹ 595.000

Apart from updating the existing text of 1st edition two new chapters, namely, Mandelstam Variables and Symmetries of Scattering Amplitude and Regge Poles have been included in this edition. The former, that constitutes the seventh chapter of the book, introduces Mandelstam variables and describes at length the s-channel, t-channel and the u-channel processes for both the equal and unequal masses of participating particles. The conditions for the occurrence of these channel processes have been made explicit through the Mandelstam plot. Introducing scattering amplitude as the matrix element of S-matrix, the crossing and Bose symmetries of scattering amplitudes for s-, t-, u-channel scatterings have been explained and the analyticity of scattering amplitude has been elucidated through examples.

The topic Regge poles, describes the study of resonances and Regge poles that can be undertaken through the scattering process. Due to the significant role of partial waves in the chapter, the scattering process has been explained through the partial wave analysis and the scattering cross section has been expressed in terms of scattering amplitude and by the optical theorem.

Assignments have been given at the end of each chapter, which contain descriptive questions as well as problems. A new feature of the book is that it has a substantial number of objective type questions to help aspirants of GATE, NET and related examinations. Most of the topics forming the model syllabus of University Grants Commission for Post Graduate Particle Physics (III Semester), Nuclear and Particle Physics (IV Semester, Strong, Weak and Electromagnetic Interactions) and Quantum Electrodynamics have been covered in the book. The topics have been developed in a pedagogical manner by providing all possible algebraic details.

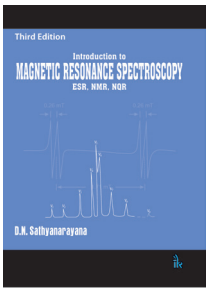
Contents:

Elementary Particles/Quantum Electrodynamics/Symmetries and Groups/Weak Interactions/Gauge Symmetries/The Standard Model/Mandelstam Variables and Symmetries of Scattering Amplitude/Regge Poles/Appendices/Bibliography/Index.

Audience – Students of Physics, and for GATE, NET and Related Examinations.

Introduction to Magnetic Resonance Spectroscopy ESR, NMR, NQR

Third Edition

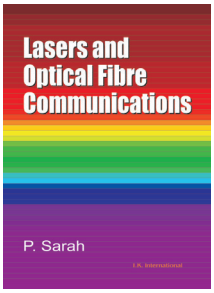


D.N. Satyanarayana

ISBN: 978-93-86768-92-6/Year 2014
Size 18 cm × 24 cm/Pages 464
Paperback/₹ 995.00

(See on page 126)

Lasers and Optical Fibre Communications



P. Sarah

ISBN: 978-81-89866-58-7/Year 2008
Size 16 cm × 24 cm/Pages 296
Paperback/₹ 395.00

The presents the latest developments in laser technology in a concise and lucid manner. The first few chapters deal with the concepts such as lasers and their origin, theoretical concepts of laser technology and their applications to various spheres. This is followed up with an exhaustive study of the various laser schemes and different laser types. A separate chapter is devoted to the applications of laser technology in spheres such as science, technology, medicine and defence.

Optical fibres are equally elegantly dealt with. In particular, Ray and Mode Theory, transmission characteristics, dispersion properties of optical wave guides, and the nature of detectors deserve special mention for the excellent treatment in the book. The gamut of communication systems including the nuances of laser propagation is also presented.

The most important feature of the book is the seamless blending of theory with practice to bring out how the components of fibre systems are put together to achieve techno economic solution. The book concludes with a short note on holography and masers.

This book will be useful for students of B.Sc, M.Sc, B.Tech, B.E. and M.Tech., practising engineers and scientists.

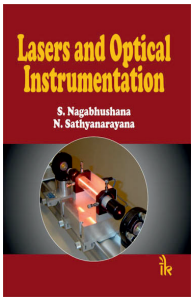
Contents:

Introduction to Lasers/Principles of Lasers/Einstein's Coefficients/ Three-and Four-Level Laser Schemes/Types of Lasers/Laser Applications/Introduction to Optical Fibres/Principle of Fibre Optics/Types of Fibres/Applications of Optical Fibres/Attenuation in Fibre Optics/Optical Detectors/Holography/Maser/Appendices/ Glossary/Index.

Audience – Students of B.Sc., MSc., B.Tech., B.E. and M.Tech., practising engineers and scientists.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Lasers and Optical Instrumentation



S. Nagabhushana
N. Sathyanarayana

ISBN: 978-93-80578-23-1/Year 2010
Size 18 cm × 24 cm/Pages 346
Paperback/₹ 435.00

Lasers and Optical Instrumentation covers B.E., M.E., and M.Sc. (Electronics) degree courses. The text covers basic principles of lasers, types of lasers and their characteristics, laser applications in engineering and medicine. Further the book includes extensive coverage of optoelectronic devices, fibre optic communication and fibre optic sensors. The book includes many solved problems throughout the text to support the theoretical concepts and help in understanding of underlying principles. Review questions have been included at the end of each chapter.

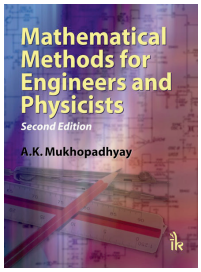
Contents:

Introduction and Laser Principles/Laser Characteristics and Applications/Laser Applications-I (Overview)/Laser Applications-II/Optoelectronic Components/Fibre Optics Communication/Fibre Characteristics/Manufacture and Applications-I/Optical Information Technology/Fibre Optic Sensors/Conclusion: Future Prospects/Appendices/Bibliography/Index.

Audience – Students of B.E., M.E., and M.Sc. (Electronics) degree courses.

Mathematical Methods for Engineers and Physicists

Second Edition



A.K. Mukhopadhyay

ISBN: 978-93-80578-03-3/Year 2010
Size 18 cm × 24 cm/Pages 1048
Paperback/₹ 695.00

The book introduces to the students of B.E., B.Tech., AMIETE and AMIE courses, the important application oriented areas of mathematics, specially in the field of technology and general science. It also caters to the requirements of the B.Sc.(Hons.) and M.Sc. students of Physics and Mathematics as well as institutions offering extended mathematical training and follows the general trend of broadening the curriculum in mathematics.

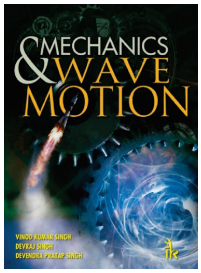
The newly added chapters include Fourier transform, Laplace transform, Z-transform and Probability theory and Statistics. Different aspects of direct and inverse transform have been added. Laplace transform method, being a very powerful tool for solving linear and non-linear differential equations have been discussed. Methods of solving integral equations have been discussed in a separate chapter. The book is an indispensable companion to the readers on account of its wide discussion of varied subject matter and solution of plenty of examples.

Contents:

Differential Equation/Linear Differential Equations of Second Order/Some Special Types of Second Order Differential Equations/Application of Differential Equations in Solving Physical and Engineering Problems/Series Solution of a Differential Equation/Solution of Some Special Differential Equations/Fourier Series/Partial Differential Equations/Numerical Solution of Differential Equations/Special Functions/Integral Equations/Fourier Transform/Calculus of Variation/Functions of Complex Variables/Laplace Transform/Z-Transform/Probability Theory and Statistics/Reference/Index.

Audience – B.E., B.Tech., AMIETE and AMIE courses.

Mechanics and Wave Motion



Vinod Kumar Singh
Devraj Singh
Devendra Pratap Singh

ISBN: 978-93-82332-32-9/Year 2013
Size 18 cm × 24 cm/Pages 420
Paperback/₹ 505.00

The present book is designed to meet the requirements of undergraduate Physics students. It will also be useful for the students taking various competitive examinations. The book divided in nine chapters deals with the basic concepts of Mechanics and Wave Motion. The first five chapters cover the topics related to mechanics whereas the last four chapters cover the topics related to wave motion. The topics have been presented in systematic, logical and explained with the help of solved examples. Short and long answer type questions, unsolved numerical and multiple-choice questions have been given at the end of each chapter.

Broadly it includes:

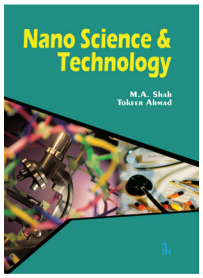
- Laws of motion and inertial frames
- Conservation laws
- Dynamics of rigid bodies
- Elasticity
- Gravitation
- Simple harmonic motion
- Damped harmonic oscillator
- Forced harmonic oscillator
- Wave motion

Contents:

Laws of motion and inertial frame/Laws of conservation/Dynamics of rigid bodies/Elasticity/Gravitation/Simple harmonic/Damped harmonic oscillator/Driven (forced) harmonic oscillator/Wave motion/Bibliography/Index.

Audience – Undergraduate Physics students.

Nano Science & Technology



M.A. Shah
Tokeer Ahmad

ISBN: 978-93-90620-04-3/Year 2021
Size: 16 cm × 24 cm/Pages 240
Paperback/₹ 325.00

The book explains scientific foundations governing the functionality of nanostructures and makes the reader familiar with many basic phenomenon. It has been written keeping the latest trends in mind and provides a solid understanding of the subject; with important features as

- Historical Background of Materials in brief and cursory
- Basic concepts of Nanomaterials explained in simple manner
- Detailed discussion on preparation methods
- Characterization techniques with schematic diagrams
- Definition of important terms of
- 300+ questions and 100 MCQ Questions for practice.

With all these exclusive features the book is found to be a useful resource for the beginners. This book is designed as a nanoscience course that could be offered by Chemistry, Physics, Materials Sciences, Engineering, medical and agriculture streams in various departments and centers all across the globe.

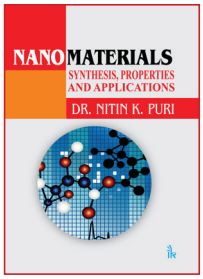
Contents:

Concept of Nanomaterials/Materials in Nano-Dimensions/Techniques of Nanomaterials Fabrication/Probing Matter through Electron Microscopy/Probing Matter Through X-ray Crystallography/

Probing Matter Through Spectroscopy/Applications of Nanomaterials Multiple Choice Questions/Index

Audience – B. Sc (Hons) Physics/B. Sc (Hons) Chemistry/M. Sc Physics/M. Sc Chemistry.

Nanomaterials – Synthesis, Properties and Applications



Dr. Nitin K. Puri

ISBN: 978-93-90620-03-6/Year 2021
Size: 18 cm × 24 cm/Pages 392
Paperback/₹ 695.00

"Nanomaterials – Synthesis, Properties and Applications" is a book for beginners to explore the enticing world of nanoscience and. This book is primarily intended for students pursuing courses in nanoscience and at undergraduate and post-graduate level. Since, nanoscience and are an interdisciplinary science which needs students from various backgrounds such as Physics, Chemistry, Biology and Engineering to extract it to its fullest. This book has a practical and functional approach and it gives an exhaustive treatment to the basics as well as applications of nanoscience and . Hence, these students will develop a zest for reconnoitring this field by reading this book. With its up-todate coverage, this book will serve as a ready reference in the field of nanoscience and .

Salient Features:

- Use of beautiful and illustrative figures to develop more interest of the reader in understanding of topic.
- This book covers the field of nanomaterials from nanoscale to galactic levels.
- Book is designed in a way, that no background of material science is required.
- The step by step, flow of chapters takes the reader on the tour of starting from basic knowledge, to synthesis techniques, followed by characterisation tools in nanoscience and and prospective applications.
- This book also shows practical application of the concepts covered in the book, by discussion of some our own research works.

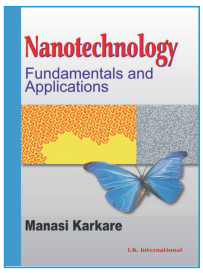
Contents:

Introduction to Nanomaterials/Synthesis of Nanomaterials/ Characterization of Nanomaterials/0D Nanomaterials/1D Nanomaterials/2D Nanomaterials/3D Nanomaterials/Biosensors/ Sensor for Cardiac Biomarker Detection on Biofunctionalized Platform of Nanostructured Tungsten Trioxide/Sensor for Cardiac Biomarker Detection on Biofunctionalized Platform of Nanocomposite of Tungsten Trioxide and Reduced Graphene Oxide/Sensor for Cardiac Biomarker Detection on Biofunctionalized Platform of Nanorods of Tungsten Trioxide/Gas Sensors/Crystallographic Modification of PdO Nanoparticles on Hydrogen Absorption/Electrochemical Hydrogen Sensing Using Palladium Oxide (Pdo) Nanoparticles/ Electrochemical Hydrogen Sensing Using Palladium Oxide (PdO)-Reduced Graphene Oxide (rGO) Nanocomposites/Room Temperature Conductometric Hydrogen Sensing Using PdO-PANI/ ITO Heterojunction/Supercapacitors/Solid State Hydrogen Storage/ Index

Audience – B.Sc/M.Sc Physics/Chemistry/B. Tech.

Nanotechnology

Fundamentals and Applications



Manasi Karkare

ISBN: 978-81-89866-99-0/Year 2008
Size 14 cm × 21.5 cm/Pages 252
Paperback/₹ 395.00

The book is intended to develop interest amongst students of all branches of Engineering and incumbent researchers so that they get to know fundamentals of the subject.

The books deals with all the aspects of and its fundamentals and applications, i.e. , tools and techniques, nanomaterials, nanocomputers, nanocomposites, risks related with the use of and its relation with the environment. Applications of in textiles, solar power, electronics, space exploration and in communication find a reasonable.

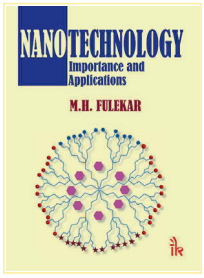
Contents:

Introduction/Tools & Techniques/Nanomaterials/Potential Risks of/, Environment and Energy/Solar Power using/and Textiles/ Nanocomposites/Nanocomputer/and the Possibilities for Space Exploration/for Communications Applications/Nanoelectronics/ Index.

Audience – UG students of all engineering & science disciplines.

Nanotechnology

Importance & Applications



M.H. Fulekar

ISBN: 978-93-80026-98-5/Year 2010
Size 18 cm × 24 cm/Pages 296
Paperback/₹ 395.00

This book highlights the latest developments and advances in the field of nanoscience and and their wide applications in design and development of Material Science and Devices, Energy, Drug Delivery, Cosmetics, Biology, Biotechnology, Tissue Engineering, Bioinformatics, Information Technology, Agriculture and Food, Environmental protection, Health Risk, Ethics, Regulations and future prospects. This book will be useful to postgraduate students, teachers and researchers, scientists and industrial personnel working in the field of Nanoscience and .

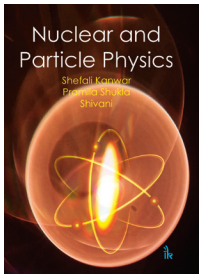
Contents:

Nanotechnology and its Applications/: Materials and Manufacture/ for Renewable Energy/in Drug Delivery/& Cosmetics/Bio/in Tissue Engineering/in Bioinformatics/in Information Technology – Applications/in Agriculture and Food Industry/Nanotechnolgy in Environment/– Risks for Health and Environment/Ethics of Nanoscience and Regulations on /The Future Prospects for / References/Glossary//: Information Sheet/Index.

Audience – Undergraduate and Postgraduate students, teachers and researchers, scientists in the field of Nanoscience and Nanotechnology.

Shelving – Material Science and Devices, Energy, Drug Delivery, Cosmetics, Biology, Biotechnology, Tissue Engineering, Bioinformatics, Information Technology, Agriculture and Food, Environmental Protection, Health Risk, Ethics, Regulations and future prospects.

Nuclear and Particle Physics



Shefali Kanwar
Pramila Shukla
Shivani

ISBN: 978-93-86768-79-7/Year 2020
Size: 18 × 24 cm/Pages 326
Paperback/₹ 445.00

This book includes to-the-point description of titles, related theories, labelled diagrams, tables, examples, etc. This book is beneficial for B.Tech. Physics, B.Sc. Physics and for M.Sc. Applied Physics students. It helps students to prepare for JAM, NET SET exams. This book has been divided into nine chapters. Topics like nuclear structure, nuclear reactions, radioactivity, elementary particles, accelerators, radiation detection, interaction of radiation, cosmic rays are covered

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

in detail. The discussion on all the topics is simple and mathematical derivations are less complex. Data, graphs and figures are provided wherever required. It also includes the basic lab experiments required in the nuclear lab for both B.Sc. as well as M.Sc. students.

Salient Features:

- Discussion on all the topics is simple and mathematical derivations are less complex.
- Data, graph and figures are provided wherever required.
- Short and long questions from various examinations of different universities.
- All concepts of nuclear physics are supported with relevant diagrams.

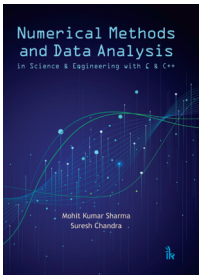
Contents:

Nuclear structure & General properties of nuclei/Nuclear Reactions/Radioactivity/Interaction of Radiation with matter/Radiation detection and monitoring devices/Particle Accelerators/Elementary Particle Physics/Cosmic Rays/Experiments of Nuclear Lab/Index

Audience – B.Sc and B.Tech students and M.Sc. Applied Physics students.

Numerical Methods and Data Analysis

in Science & Engineering with C & C++



Mohit Kumar Sharma • Suresh Chandra

ISBN: 978-93-86768-51-3/Year 2019
Size: 18 × 24 cm/Pages 416
Paperback/₹ 395.00

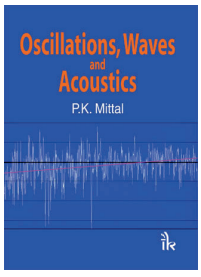
In science and engineering, use of computers is indispensable. The computers are often used for numerical calculations of mathematical expressions. Use of the C and C++ languages is nowadays popular among the students of Science and Engineering. This book discusses numerical techniques: Interpolation, Differentiation, Integration, Roots of Equation, Simultaneous Linear Equations, Eigenvalues and Eigenvectors, Differential Equations, Partial Differential Equations, Random Numbers, Statistical Parameters, and the Error Analysis. For these techniques, the computer programs are written separately by using the C and C++ languages. One of the policies followed in this book has been to discuss each technique by solving an exercise with the help of calculator and then developing the computer program.

Contents:

Computers/C/C++/Error Analysis/Interpolation/Differentiation/Integration/Roots of Equation/Simultaneous Linear Equations/Eigenvalues and Eigenvectors/Differential Equations/Partial Differential Equations/Random Numbers/Statistical Parameters/Bibliography/Index

Audience – B.Sc(H) and General Physics and Mathematics, M.Sc Physics and Mathematics & B.Tech students.

Oscillations, Waves and Acoustics



P.K. Mittal

ISBN: 978-93-80578-27-9/Year 2010
Size 16 cm × 24 cm/Pages 568
Paperback/₹ 425.00

The present book is meant for the students of undergraduate science and engineering courses. This course finds lots of applications, right from Mechanics, Sound, Optics, Solid State Physics, Electrodynamics to Electronics. The chapters cover a vast number of topics like free, forced, damped oscillations, normal modes of vibrations, sound waves, overdamped and ballistic oscillations, LCR circuits etc. In every chapter the topics are dealt with in detail followed by illustrated solved examples and unsolved exercises.

Some previous experience with a Calculus course in which differential equations have been discussed is highly desirable. However, the details of the steps in arriving at final solutions are worked out in detail.

Contents:

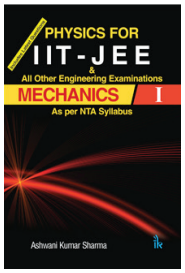
Simple Harmonic Motion/Free, Damped and Forced Vibrations/Circuit Transients-Damped and Forced Oscillations/Addition of Simple Harmonic Motions: Lissajous' Figures/Normal Modes of Vibration: Coupled Oscillations/Wave Motion/Velocity of Sound/Stationary Waves, Interference and Beats/Reflection, Refraction and Diffraction/Vibrations in Strings, Air Columns and Rods/Fourier's Theorem/Architectural Acoustics/Ultrasonics/Some Miscellaneous Acoustical Phenomena/Electromagnetic Waves/Matter Waves, Shock Waves and Seismic Waves/Index.

Audience – B.Sc. and M.Sc. (Physics) students.

Physics for IIT - JEE & All Other Engineering Examinations

Volume - I

MECHANICS As per NTA Syllabus



Ashwani Kumar Sharma

ISBN: 978-93-86768-10-0/2019
Size 18 cm× 24 cm/Pages 1008
Paperback/₹ 895.00

Physics for IIT-JEE (Mechanics-I) is designed for the aspirants of JEE and other engineering.

The volumes contain to the point theory. Numerous of solved numericals along with practice tests having subjective type, objective type, matrix metaling type and integer type) questions which provide the aspirants thorough understanding of the subject and help prepare them for any type of problem asked in the IIT JEE.

Salient Features:

- Develop and hone the problem solving technique.
- Abundant tips, time managing short-cut methods for solving specific problems.
- Plenty of conceptual and application based numericals with detailed solutions and free-body diagrams for better understanding.

Contents:

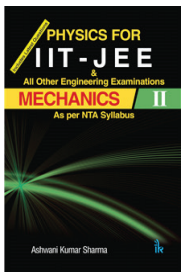
Unit Dimension Errors and Instruments/Vectors/Motion in One Dimension/Motion in Two Dimensions (Projectile Motion)/Law of Motion and Friction/Work Power Energy.

Audience – IIT-JEE aspirants.

Physics for IIT - JEE & All Other Engineering Examinations

Volume - II

MECHANICS As per NTA Syllabus



Ashwani Kumar Sharma

ISBN: 978-93-86768-11-7/Year 2019
Size 18 cm× 24 cm/Pages 1008
Paperback/₹ 925.00

Physics for IIT-JEE (Mechanics-II) is designed for the aspirants of JEE and other engineering.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

The volumes contain to the point theory. Numerous of solved numericals along with practice tests having subjective type, objective type, matrix metaling type and integer type) questions which provide the aspirants thorough understanding of the subject and help prepare them for any type of problem asked in the IIT JEE.

Salient Features:

- Develop and hone the problem solving technique
- Abundant tips, time managing short-cut methods for solving specific problems
- Plenty of conceptual and application based numericals with detailed solutions and free-body diagrams for better understanding.

Contents:

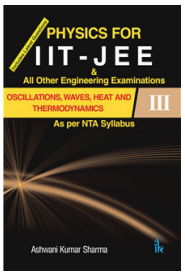
Circular Motion/Collisions/Rotation/Gravitation/Mechanical Properties of Matter/Hydrostatics or Fluid Statics.

Audience – IIT-JEE aspirants.

Physics for IIT - JEE & All Other Engineering Examinations

Volume - III

Oscillations, Waves, Heat and Thermodynamics As per NTA Syllabus



Ashwani Kumar Sharma

ISBN: 978-93-86768-12-4/Year 2019
Size 18 cm× 24 cm/Pages 1143
Paperback/₹ 925.00

Physics for IIT-JEE (Oscillation, waves, heat and thermodynamics-III) is designed for the aspirants of JEE and other engineering.

The volumes contain to the point theory. Numerous of solved numericals along with practice tests having subjective type, objective type, matrix metaling type and integer type) questions which provide the aspirants thorough understanding of the subject and help prepare them for any type of problem asked in the IIT JEE.

Salient Features:

- Develop and hone the problem solving technique
- Abundant tips, time managing short-cut methods for solving specific problems
- Plenty of conceptual and application based numericals with detailed solutions and free-body diagrams for better understanding.

Contents:

Simple Harmonic Motion/Wave/Superposition of Wave (Wave–II)/ Thermometry, Calorimetry and Expansion/Kinetic Theory of Gases/ Thermodynamics/Heat Transfer.

Audience – IIT-JEE aspirants.

Physics for IIT - JEE & All Other Engineering Examinations

Volume - IV

Electrostatics and Magnetism As per NTA Syllabus



Ashwani Kumar Sharma

ISBN: 978-93-86768-45-2/2019
Size 18 cm × 24 cm/Pages 1936
Paperback/₹ 1475.00

Physics for IIT-JEE (Electrostatics and Magnetism-IV) is designed for the aspirants of JEE and other engineering examinations.

The volumes contain to the point theory. Numerous of solved numericals along with practice tests having subjective type, objective type, matrix matching and integer type questions which provide the aspirants thorough understanding of the subject and help prepare them for any type of problem asked in the IIT JEE.

Salient Features:

- Develop and hone the problem solving technique
- Abundant tips, time managing short-cut methods for solving specific problems
- Plenty of conceptual and application based numericals with detailed solutions and free-body diagrams for better understanding.

Contents:

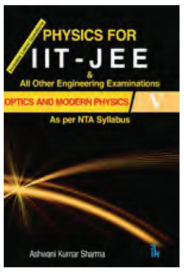
Electrostatics/Capacitor/Electricity and RC Circuit/Thermal and Chemical Effects of Current/Magnetic Effects of Current/Magnetic Force on Moving Charge, Moving Conductor/Classical Magnetism/ Electromagnetic Induction.

Audience – IIT-JEE aspirants.

Physics for IIT - JEE & All Other Engineering Examinations

Volume - V

Optics and Modern Physics As per NTA Syllabus



Ashwani Kumar Sharma

ISBN: 978-93-86768-46-9/2019
Size 18 cm× 24 cm/Pages 1424
Paperback/₹ 1095.00

Physics for IIT-JEE (Optics and Modern Physics-V) is designed for the aspirants of JEE and other engineering examinations.

The volumes contain to the point theory. Numerous of solved numericals along with practice tests having subjective type, objective type, matrix matching and integer type questions which provide the aspirants thorough understanding of the subject and help prepare them for any type of problem asked in the IIT JEE.

Salient Features:

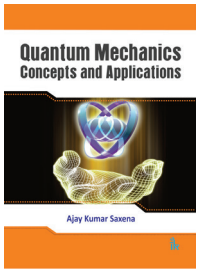
- Develop and hone the problem solving technique
- Abundant tips, time managing short-cut methods for solving specific problems
- Plenty of conceptual and application based numericals with detailed solutions and free-body diagrams for better understanding.

Contents:

Reflection/Refraction and Dispersion of Light/Refraction at Spherical Surface/Wave Nature of Light/Electron, Photon, Photoelectric Effect and X-Rays/Nuclear Physics/Alternating Current and Electromagnetic Waves/Digital Electronics.

Audience – IIT-JEE aspirants.

Quantum Mechanics Concepts and Applications



Ajay Kumar Saxena

ISBN: 978-93-86768-89-6/Year 2020
Size: 18 × 24 cm/Pages 1024
Paperback/₹ 1295.00

The book presents basic concepts of Quantum Mechanics to the undergraduate and

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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postgraduate students. Starting from the preliminary ideas related to quantum mechanics, a systematic and logical approach has been used in the subsequent chapters, together with the inclusion of modern concepts such as field quantization, Schrödinger's cat problem, qubits and quantum computing. The approach is conceptual and pedagogical and stress is given on using the Dirac notations.

Salient Features:

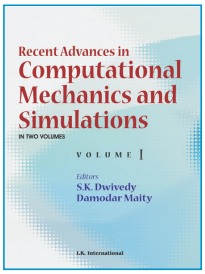
- Student-friendly approach
- Solved examples and questions at the end of each chapter.
- Inclusion of topics such as Fields and Field quantization, the Einstein- Podolsky-Rosen Argument, Bell's Inequality and Schrödinger's Cat Problem, Qubits and Quantum computing.

Contents:

Preliminary Ideas and Concepts/Theory of the Atom/Probability Concepts and Statistical Distribution Functions/Beginning of the Quantum Concepts/Wave Functions, State Vector Representation Postulates, and Heisenberg Principle/The Dirac Delta Function and Fourier Techniques and Wave Packets/Wave Mechanics/ Operator—Formalism and Operators/Simple Harmonic Oscillator/ Unitary Operators and Unitary Transformations/Symmetries, Invariance Principles and Conservation Laws/Dirac Representation of a State, Operators and Hilbert-Space/Spherical coordinates and the Hydrogen atom problem/Angular momentum/Dynamics of Quantum Systems/Time Independent Perturbation Theory/ Time Dependent Perturbation Theory/The Variation Method/ The WKB Approximation Method/Scattering Theory/Relativistic Theory/Fields, Field Quantization and Second Quantization/The EPR Argument, Bell's Inequality and Schrödinger's Cat Problem/ Quantum Computing/Appendices/Index

Audience – B.Sc (Hons.) and M.Sc students.

Recent Advances in Computational Mechanics and Simulations



Two Volume Set

Editors

S.K. Dwivedy
Damodar Maity

ISBN: 978-81-89866-16-7 (Set)/Year 2007
Size 18.5 cm × 25 cm/Pages 2173
Paperback/₹ 4995.00

The aim of the *Recent Advances in Computational Mechanics and Simulations* is to provide an opportunity for industry to share their research findings to further the cause of computational mechanics.

The present book, divided into two volumes, contains 296 contributed full-length papers encompassing three broad areas of Computational Solid Machanics, Fluid Mechanics and Multi Physics.

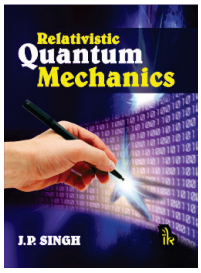
Contents:

Volume I: Composite Structures/Fracture and Damage Mechanics/ Fracture and Damage Analysis for Composite Structures/Vibration and Control/Vibration and Control for Composite Structures/Smart Structures/Electro-Mechanics/Magnetics/Nonlinear Mechanics/ Structural Analysis/Computational Techniques in Structures.

Volume II: Fluid Flow /Turbulence Modeling/Hydrodynamics/ Multiphase Flow/Wave Dynamics and Tsunamis/Fluid-Structure Interaction/Porous Media Mechanics/Computational Techniques in Fluids/Transient Dynamic Problems/Heat Transfer/Geomechanics/ BridgeandDamStructures/Biomechanics/MicroandNano-Mechanics.

Audience – Scientists, Engineers and Designers.

Relativistic Quantum Mechanics



J.P. Singh

ISBN: 978-93-82332-63-3/Year 2014
Size 18 cm × 24 cm/Pages 498/
Hardback/₹ 1595.00

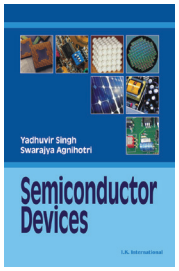
This book fights that trend by covering in detail the topics that are thrown by the wayside in the traditional coverage. Dynamics of physical systems are represented by differential equations. A study of the symmetry groups of such equations provides valuable insights about the system dynamics. The Lorentz and Poincare groups constitute the underlying symmetry groups of special relativity and thus, of the relativistic wave equations. To put these issues in perspective and realizing the cardinal role played by "symmetry" in modern physics.

Contents:

Symmetry in Relativistic Quantum Mechanics/Representations of the Lorentz & Poincare Groups and Transformation Properties of Physical Quantities/The Schrodinger Equation/The Dirac Equation/ Relativistic Invariance of the Dirac Equation/Solutions of the Dirac Equation/Further Properties of the Dirac Equation/Dirac Equation: Charge Conjugation and Time Reversal/Relativistic Dynamics of Massless Particles/Wave Packets of Dirac Waves/Angular Momentum and the Dirac Equation for the Hydrogen Atom/The Hydrogen Atom in the Momentum Representation/Bibliography & References/Index.

Audience – Postgraduate students and research scholars.

Semiconductor Devices



Yaduvir Singh
Swarajya Agnihotri

ISBN: 978-93-80026-12-1/Year 2009
Size 16 cm × 24 cm/Pages 236
Paperback/₹ 345.00

- Salient Features:
- Minutely worked out examples give a complete understanding and hold on this subject.
- Variety of solved, unsolved and multiple choice questions completely cover the diversity of this subject, which is extremely useful for semester examinations, GATE, PSUs examinations.
- Pedagogy includes relevant and to the point text, solved questions, unsolved questions and multiple choice questions.

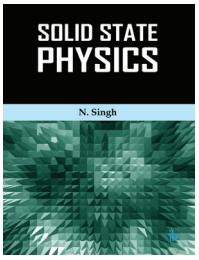
It will prove highly useful for engineering students of UG, PG and PhD of electrical, electronics and communication, computer science, information technology, civil, industrial, instrumentation and control aerospace, mechanical and chemical disciplines. This book is also of greatest utility to the students doing AMIE, Grade IETE, M.Sc. (Physics), M.Sc. (Electronics) etc.

Contents:

Semiconductor and P-N Junction Diode/Bipolar Junction Transistor/ High Frequency Model of BJT/Field Effect Transistors/Power Supplies/Index

Audience – Students of AMIE, Grade IETE, M.Sc. (Physics), M.Sc. (Electronics) etc.

Solid State Physics



N. Singh

ISBN: 978-93-90620-28-9/Year 2021
Size: 18 cm × 24 cm/Pages 328
Paperback/₹ 425.00

The book "Solid State Physics" is written for B.Sc. Physics (Hons.) students according to the latest CBCS syllabus. The help of diagrams and

examples is taken to clear the basic concepts of Physics. Formulas are derived step by step for easy understanding. Questions for examination and multiple choice questions for quick revision are given at the end of each chapter. The book has been divided into eight chapters namely crystal structure and reciprocal lattice, crystal diffraction, elementary theory of lattice dynamics, magnetic properties of solids, dielectrics properties of materials, properties ferroelectric of materials, elementary band theory of solids and superconductivity.

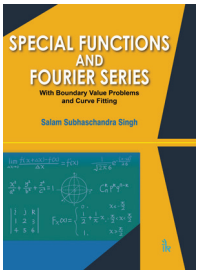
Contents:

Crystal Structure and Reciprocal Lattice/Crystal Diffraction/ Elementary Theory of Lattice Dynamics/Magnetic Properties of Solids/Dielectrics Properties of Materials/Properties of Ferroelectric Materials/Elementary Band Theory of Solids/Superconductivity/ Index

Audience – B.Sc Physics, B.Sc Physics (Hons.).

Special Functions and Fourier Series

With Boundary Value Problems and Curve fitting



Salam Subhaschandra Singh

ISBN: 978-93-90620-14-2/Year 2022
Size: 18 cm × 24 cm/Pages 984
Paperback/₹ 1225.00

Designed for undergraduate and postgraduate students of Physics, Mathematics and Engineering, this book includes almost all the special functions, that is, Fourier Series, Boundary Value Problems and Theory of Errors and Fitting of Curves. It is supposed that the students are acquainted with fundamentals of calculus, co-ordinate geometry, trigonometry and the theory of complex variables.

Salient features:

The salient features of this book are:

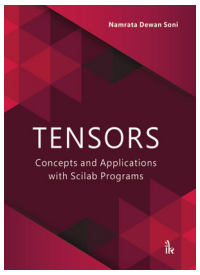
- Every Special Function contained in this book is elaborately studied with plenty of solved and unsolved problems.
- Compared with the existing books in the same fields, the book will be more useful to the students as it contains wider studies on various Special Functions in more detail.
- This book contains larger number of solved problems and, therefore, it will be more useful to the students.
- Applications of Fourier Series and Special Functions in solving Boundary Value Problems are included.
- Applications of Fourier Transform in solving differential equations is included.
- A separate chapter on "Theory of Errors and Fitting of Curves" has been included.

Contents:

Power Series and Their Convergence and Divergence/Legendre Polynomials/Associated Legendre Polynomials/Spherical Harmonics/Hermite Polynomials/Laguerre Polynomials/Associated Laguerre Polynomials/Bessel Functions/Hypergeometric Functions/ Dirac-Delta Function and Heaviside Unit Step Function/Fourier Series and Fourier Transforms/Partial Differential Equations and Boundary Value Problems/Index

Audience – BSc Physics Hons.

Tensors: Concepts and Applications with Scilab Programs



Namrata Dewan Soni

ISBN: 978-93-86768-59-9/Year 2019
Size: 18 cm × 24 cm/Pages 280
Paperback/₹ 395.00

This all-inclusive text introduces undergraduate students to the basics of linear vector spaces, tensor analysis especially, Cartesian and general tensors. The aim of this book is to specifically explain the fundamentals of tensors and their applications to mechanics, and elasticity in a consistent manner. The contents of the book provide insights of all the major topics of the tensors analysis, viz., transformations of coordinates, Einstein summation convention, Quotient law, isotropic tensor, moment of inertia tensor, metric tensor and Minkowski space. Wherever needed a short summary of the fundamental knowledge has been provided. This book covers the syllabus of various institutions which offer a course in Mathematical Physics. It also prepares the students to solve various problems of physics using Scilab programming.

Salient Features:

- More than 50 figures, illustrations and tables that make the learning of the subject easier.
- Detailed presentation of Cartesian and general tensors.
- Basic linear vector spaces are also covered.
- Also provides the Scilab code to solve various problems of physics mentioned in the curriculum of BSc (Hons) Physics course.

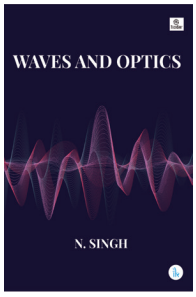
Contents:

Introduction/Cartesian Tensors/General Tensors/Linear Vector Spaces/Matrices /Scilab Codes/Index

Audience – B.Sc (Hons.) Physics.

Waves and Optics

Forthcoming



N. Singh

ISBN: 978-93-90620-18-0/2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

Wave optics, also called physical optics, deals with studying various phenomena such as polarization, diffraction, interference and other occurrences where ray approximation of geometric optics cannot be done. Thus, the section of optics that deals with the behavior of light and its wave characteristics is said to be wave optics.

The book has been divided into 16 chapters: superposition of collinear harmonic oscillators, superposition of two perpendicular harmonic oscillations, wave motion-general, wave motion in a string, velocity of waves, fluids, sound, wave optics, interference, interferometers, diffraction theory, Fraunhofer diffraction, Fresnel diffraction, polarization, laser and holography.

Salient Features:

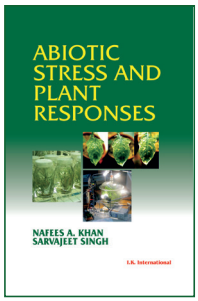
- The fundamental concept of each article is presented in a simple language for easy understanding.
- All-important formulae have b-een derived from the first principles so that the book can also be used for self-study.
- Solved and unsolved questions are given in each chapter to clarify difficult concepts.

Audience – B.Sc students of Physics.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Abiotic Stress and Plant Responses



Editors

Nafees A. Khan • Sarvajeet Singh

ISBN: 978-81-89866-95-2/Year 2008
Size 18 cm × 24 cm/Pages 312
Hardback/₹ 1495.00

Abiotic stresses such as temperature, radiation, salinity, heavy metals and drought are the main factors that limit crop productivity. The anthropogenic activities and changed agricultural system, intense use of chemical fertilizers and artificial irrigation have increased temperature, UV-B radiation, drought, salinity and heavy metals stresses and caused yield losses annually to a greater extent. To overcome the yield losses due to abiotic stresses, plants need to possess mechanisms of avoidance and tolerance to stress. For sustainable agriculture development, future crops should have abiotic stress resistant traits and the mechanism for stress tolerance. The tolerance mechanisms can also be improved by the development of new techniques employing plant physiology and plant molecular biology tools. In this present book the advances in the area of abiotic stress responses and stress management have been included. The information may be useful in elucidating limits and tolerance of a plant to abiotic stress.

The present volume, comprising seventeen chapters by outstanding and eminent specialists across the world, covers the information on abiotic stresses such as salinity, heavy metals, drought and herbicides.

Salient Features:

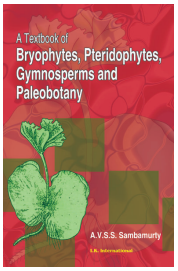
- describes physiological and molecular responses, role of signaling molecules and plant phenolics in abiotic stress tolerance
- covers the information on salinity induced oxidative stress, strategies of halophytes to survive in a salty environment and tolerance mechanism
- discusses heavy metal induced modulation of gene expression, in general responses and role of metal binding peptides and antioxidants
- deals with the resistance mechanism related to changes in endogenous polyamines to drought stress
- covers the information on herbicide contamination in plants
- describes the significance of salicylic acid, a plant hormone, in abiotic stress tolerance.

Contents:

Physiological and Molecular Responses of Higher Plants to Abiotic Stresses/Signaling Molecules in Plants under Abiotic Stress/Plant Phenolics and their Role in Abiotic Stress Tolerance/Salinity and Oxidative Stress/Strategies of Halophytes to Survive in a Salty Environment/Salinity Tolerance Mechanisms of Higher Plants/ Modulation of Gene Expression in Plants Exposed to Heavy Metals/ Responses of Higher Plants to Heavy Metal Stress/Metal-Binding Peptides and Antioxidant Defense System in Plants: Significance in Cadmium Tolerance/Resistance to Drought in Crops/Changes in Endogenous Polyamines and Some Stress Markers Content Induced by Drought, 4PU-30 and Abscisic Acid in Wheat Plants /Detection of Herbicide Contamination in Plants through Changes in Leaf Spectral Reflectance and Fluorescence/Involvement of Salicylic Acid in Plant Defense against Stresses/The Role of Salicylic Acid in Thermotolerance of Plants/Salicylic Acid and Energy Exchange in Plant Cells/Genotype Differences of Cadmium Toxicity in Soybean Seedlings: The role of Salicylic Acid and Phenols/ Protection of Ultrastructure in chilling-Stressed Banana Leaves by Salicylic Acid.

Audience – Postgraduates and Researchers in Agricultural Science.

A Textbook of Bryophytes, Pteridophytes, Gymnosperms and Paleobotany



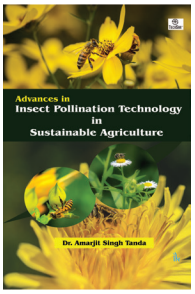
A.V.S.S. Sambamurty

ISBN: 978-81-88237-45-6/Year 2005
Size 18 cm × 24 cm/Pages 584
Paperback/₹ 545.00

(See on page 159)

Advances in Insect Pollination Technology in Sustainable Agriculture

New



Amarjit Singh Tanda

ISBN: 978-93-90620-71-5/Year 2023
Size 18 cm × 24 cm/Pages 326
Hardback/₹ 2995.00

This is a comprehensive, authentic, and standard book on unique fundamentals applied to advances in insect pollination technology in sustainable agriculture industryThis book aims to accomplish the needs of undergraduate and postgraduate students in insect pollination technology. Entomologists, agronomists, horticulturists, environmental scientists, plant breeders, researchers, professionals, extension workers, seed producers, and industrial entrepreneurs will benefit from this book.

The book is divided into fourteen chapters which deal with a broad and comprehensive range of topics on advance in insect pollination technology in sustainable agriculture,global agro-industry in the absence of insect pollinators – historical outlook, pollination concepts and crop production, supplementary pollinator services in yield optimization of crop plants through management of bees, climatechange and pollinators and conservational aspects of pollinators, chemical ecology in cross-pollination, seasonal management for improved foraging of honey bees andenriched honey production,insect pollination technology and its economic significance,wild bees are important in sustainable agriculture, natural foraging and artificial feeding ofdomesticated honey bees, plant biochemical in insect pollination for crop improvement, urbanization and its impact on native pollinator. Pollinators are equally important inintegrated pest and management technology, andchallenges and threats for pollinator conservation.

Salient Features:

- Comprehensive coverage of all major aspects of the subject;
- Traditional and modern practices in insect pollination technology or entpollinatology
- Abundant pictures, diagrams, and tables supplement the text.

Audience: Undergraduate and postgraduate students in insect pollination technology. Entomologists, agronomists, horticulturists, environmental scientists, plant breeders, researchers, professionals seed producers, and industrial entrepreneurs

Advances in Biological Control Pest Management Technology

Forthcoming



Amarjit Singh Tanda

ISBN: 978-93-90620-56-2/Year 2024
Size 18 cm × 24 cm/Pages TBA
Hardback/₹ TBA

In modern crop cultivation, biological control is used primarily for controlling insect pests.

The main advantages of biocontrol technology or biological control are that no artificial substances are added and that pathogens/animals that develop resistance against biological control agents are rare. This approach has no adverse effect on human health or the environment and is self-sustaining.

This is a comprehensive, authentic, and standard book on advances in biological control pest management technology, divided in fifteen chapters which deal with significance and importance of biological control in insect pest management, history of biological control, and why do we need it.

This book has been crafted to accomplish the needs of undergraduate and postgraduate students of global universities in integrated nematode pest management technology.

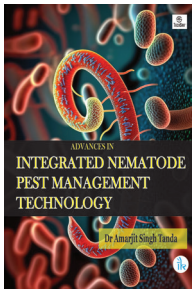
Salient Features:

- Comprehensive coverage of all major aspects of the subject;
- Traditional and modern practices in advances in integrated nematode pest management technology;
- Abundant pictures, diagrams, and tables supplement the text.

Audience: Undergraduate & Postgraduate& Research Scholars in Agriculture Sciences.

Advances in Integrated Nematode Pest Management Technology

Forthcoming



Amarjit Singh Tanda

ISBN: 978-93-90620-50-0/Year 2024
Size 18 cm × 24 cm/Pages TBA
Hardback/₹ TBA

In changing the attitude of the world entomologists, nematologists, and growers as to the complete dependence on synthetic chemical pesticides for managing the ravages caused by the insect and nematode pests in field crops, new approaches are needed.This is a comprehensive, authentic, and standard book on advances in integrated nematode pest management technology new visions, and concepts. This book has been crafted to accomplish the needs of undergraduate and postgraduate students of global universities inintegrated nematode pest management technology.Nematologists, entomologists, agronomists, horticulturists, environmental scientists, plant breeders, researchers professionals, horticulturists, extension workers, seed producers, and industrial entrepreneurs will benefit from this book.

Salient Features:

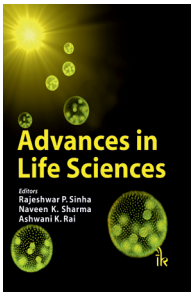
- Comprehensive coverage of all major aspects of the subject;
- Traditional and modern practices in advances in integrated nematode pest management technology;
- Abundant pictures, diagrams, and tables supplement the text.

Audience: Undergraduate and Postgraduate Students of Agricultural Sciences.

Advances in Life Sciences

Editors

Rajeshwar P. Sinha
Naveen K. Sharma
Ashwani K. Rai



ISBN: 978-93-81141-04-5/Year 2011
Size 18 cm × 24 cm/Pages 520
Hardback/₹ 2495.00

Advances in Life Sciences provides state-of-the-art information and highlights the current developments in life sciences. It encompasses topics on viruses to crop plants, comprising seventeen reviews and six original articles. For the benefit of graduate and postgraduate students and researchers, a chapter on the use of internet for searching scientific literature is included. Subjects covered include stress biology, phytotaxis, biological nitrogen fixation and its biotechnology, community ecology, microbial production of drugs, cosmetics and other bioactive compounds, long-term storage of useful microbes, methods to transfer genes into multicellular organisms and gene expression. The book provides an insight in future perspectives in particular field with extensive bibliographies at the end of each chapter. The book will be highly useful and must-read for students, researchers and professionals in botany, environmental sciences, agriculture, molecular biology and life sciences.

Contents:

PART - I. REVIEWS : Abiotic Stress-Induced Metabolic Alterations in Crop Plants: Strategies for Improving Stress Tolerance/Physiological Implications of Salt Stress and Tolerance Mechanisms/Phosphate Transporters in Symbiotic Arbuscular Endomycorrhizal Association: A Bioinformatics Approach/Investigation of Gravitaxis and Phototaxis in Euglena gracilis/Symbiotic and Asymbiotic N_2 Fixation/Cyanobacterial Biotechnology : Nutritional Interactions in Free-living and Symbiotic Forms/Development of New Generation of Cephalosporins/Cyanotoxins : An Emerging Environmental Concern/UV-Absorbing Compounds in Algae/Cyanobacteria : A Potent Source of Pharmaceuticals/Cryoprservation : A Novel Approach to Cyanobacterial Germplasm Conservation/Methods for DNA Transfer in Filamentous Cyanobacteria and Strategy to Overcome Restriction by Host-encoded Endonucleases/Genotoxin-Induced DNA Damage : Detection, Recovery and Influence on Human Health/HIV: Present Status and Future Perspectives/Problems, Pitfalls and Advantages of Transgenic Crops/Gene: Expression and Regulation/Terrestrial Vegetation : Community Features and Diversity Attributes

PART - II. ORIGINAL CONTRIBUTIONS : Action Spectrum of Mycosporine-like Amino Acid (MAA) Induction in Prorocentrum micans under Solar Radiation/Establishment of Callus and Cell Suspension Culture of Withania somnifera (L.) Dunal/Effect of Yeast Extract in Cell Suspension Culture of Withania somnifera (L.) Dunal/Monetary Value of Lake Ramgarh (Gorakhpur, UP, India): A Preliminary Investigation/Phytogeographical Analysis of Dewas District (Malwa Region (M.P., India)/Effect of Mine Spoils on Growth, Biochemical Composition and Yield of Chickpea (Cicer arimhetinum L)

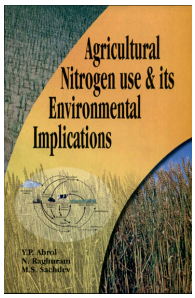
PART - III. SPECIAL ARTICLE : Searching Internet for Scholarly Information

Audience – Students, researchers and professionals in botany, environmental sciences, agriculture, molecular biology and life sciences.

Agricultural Nitrogen use & its Environmental Implications

Editors

Y.P. Abrol
N. Raghuram
M.S. Sachdev



ISBN: 978-81-89866-33-4/Year 2007
Size 18 cm × 25 cm/Pages 572
Hardback/₹ 1995.00

Nitrogen fertilizers are the inescapable necessity to enhance agricultural production and to sustain food security. However, their inefficient use accrues from inherent limitations of the crop plants as well as the manner in which N fertilizers are formulated, applied and managed. Excessive accumulation of N in the environment leads to soil acidification, pollution of groundwater and eutrophication of surface water, posing a public health problem as well as ecosystem imbalance. Moreover, the ozone layer depletion and greenhouse effects of NOx gases have global implications.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Agricultural Nitrogen Use: Environmental Implications provides a comprehensive, interdisciplinary description of problems related to the efficient use of nitrogen in agriculture, in the overall context of the nitrogen cycle, its environmental and human health implications, as well as various approaches to improve N use efficiency. The book is presented in six sections: N Use, Flows and Cycling in Agricultural Systems; N Use Efficiency in Crop Ecosystems; Management Options and Strategies for Enhancing N Use Efficiency; Plant Physiological and Molecular Aspects of Enhancing N Use Efficiency; Role of Legumes and Biofertilizers in Agricultural N Economy; and Environmental and Human Health Implications.

Spread in 28 chapters the book discusses the subject area under the following heads.

Contents:

Section I: Nitrogen use, flows and cycling in agricultural systems

Section II: Nitrogen use efficiency in crop ecosystems

Section III: Management options and strategies for enhancing N use efficiency

Section IV: Plant physiological and molecular aspects of enhancing use efficiency

Section V: Role of legumes and biofertilizers in agricultural N economy

Section VI: Environmental and human health implications.

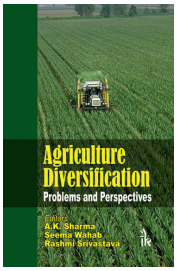
Audience – Students and Research Scholars in Agricultural Science, Biotechnology and Microbiology.

Agriculture Diversification

Problems and Perspectives

Editors

A.K. Sharma • Seema Wahab
Rashmi Srivastava



ISBN: 978-93-80026-49-7/Year 2010
Size 18 cm × 24 cm/Pages 224
Hardback/₹ 695.00

Poverty continues to persist in many countries throughout the world despite improvements in the global trade regime and significant enhancement in agricultural productivity through the green revolution technologies. To achieve the millennium goal of halving poverty by 2015, these people should be provided with alternative production opportunities that can generate new employment and enhance incomes. Data from several countries reviewed in this study confirm that agricultural diversification can contribute to this.

In a scenario of shrinking land and depleting water resources, the challenge of the new millennium is to increase biological yields to feed the ever-growing population without destroying the ecological foundation. It is thus important not to package this challenge as a demand or imposition on farmers, for which they would bear the cost, but as a necessity and methodology to also sustain their welfare.

This book deals with different practices in agriculture diversification. Care has been taken to include applied aspects and present scenario of different practices necessary for agriculture to the diversification. The book will be of use to the students, researchers and progressive farmers.

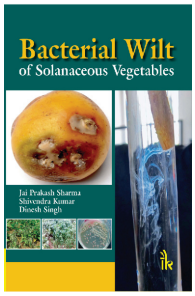
Contents:

Agricultural Diversification: Problems and Prospects/Diversifi-cation under Different Agro-Ecosystem/Role of Transfer of Technology in Sustainable Agriculture Development/Integrated Pest Management Strategies for Sustainability of Agriculture/Fungal Biocontrol Agents (BCAS) and their Metabolites/Biofertilizers for Sustainable Agriculture /Role of Mycorrhiza as Biofertilizer in Agriculture/ Forage Crops in Agriculture Diversification: Managing Fertilizer use in Forage Cultivation/Diversification with Special Emphasis on Rice Varietal Adoption/groforestry for Biodiversity Conservation/ Flori-culture—A Preposition for Diversification/Agriculture Diversification: Medicinal and Aromatic Plants/Protected Vegetable Cultivation/Biodiversity for the Rehabilitation of Degraded Lands/ Aquaculture Status and Strategies/Index.

Audience – Students and Research Scholars in Agricultural Science, Biotechnology and Microbiology.

Bacterial Wilt of Solanaceous Vegetables

Jai Prakash Sharma • Shivendra Kumar
Dinesh Singh • Kaushik Velusamy



ISBN: 978-93-84588-22-9/Year 2016
Size 20 cm × 30/8 cm/Pages 280
Hardback/₹ 2295.00

Bacterial wilt caused by *Ralstonia solanacearum* is one of the most important diseases of solanaceous vegetables, viz., tomato, eggplant, chili and pepper and potato in India and the world. The disease is serious and soil-borne in nature and damage of crop is widespread and loss is significant. Several researches on understanding nature of pathogen and ways and means of mitigation of the loss have been done in India and abroad but those are not available at one place and pose problems to seekers of information. In this book the information scattered in various forms of literature (1896-2014) is collected and systematically compiled crop-wise in seven chapters. The importance of the above solanaceous vegetables and their nutritive value, pathogen and bacterial wilt has been discussed in the first chapter. The symptomatology of diseases with photographs, their etiology, distribution of race biovars and their diagnosis, morphological, biochemical physiological characteristics of pathogen, pathogenecity, serodiagnosis, molecular diagnosis and protocol for detection of *R. solancearumin* soil and plant has been discussed in the second chapter. The maintenance and preservation of culture has been included in the third chapter. Genomics and mechanism of pathogenesis has been discussed in the fourth chapter. Research work done on losses and epidemiology has been compiled in the fifth chapter in which the detailed information on survival and host range has also been included. In the sixth chapter management of diseases has been discussed under sub-sections viz; Integrated disease management, cultural, crop rotation, soil amendment, biological, host resistant, induced systemic resistance and chemical. Conclusion and future research has been discussed in chapter seven. This compilation will be useful for persons engaged in research, teaching and extension. The book will be useful for the post-graduate and Ph. D students, researchers, extension workers as well as educated farmers to help enhance knowledge about bacterial wilt of solanaceous crops and their scientific way of management to reduce crop losses.

Contents:

Introduction/Diagnosis/Maintenance and preservation of culture/ Mechanism of pathogenesis and genomics/Losses and epidemiology/ Management/Conclusion and future research/References/Index.

Audience – Post-graduate Students Research Scholars in Agriculture.

Biodiversity

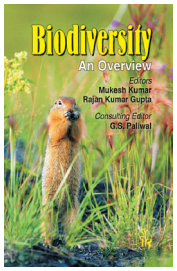
An Overview

Editors

Mukesh Kumar
Rajan Kumar Gupta

Consulting Editor

G.S. Paliwal



ISBN: 978-93-80578-88-0/Year 2011
Size 18 cm × 24 cm/Pages 478
Hardback/₹ 3995.00

India's phytodiversity is one of the most significant in the world. India is one of the twelve mega-biodiversity centers in the world and also an important center of origin of agrobiodiversity. It is therefore, very important to study, document and conserve the plant wealth of India and also of the world before its possible extinction. There are convincing scientific, economic and sociological reasons for giving priority to the conservation of the major centers of plant diversity throughout the world.

The strategies to conserve the biodiversity include establishment of protected area network and corridors with emphasis on appropriate levels of management, reduction of anthropogenic pressure on natural populations by cultivating them elsewhere, programmes of augmentation, reintroduction and introduction of target taxa, restoration of degraded habitats, etc. The conservation strategies can be either, in-situ conservation of genetic resources within their ecosystem and natural habitat or ex-situ conservation of components of genetic material of biological diversity outside their natural habitat. The choice of conservation strategy depends upon the nature of the material to be conserved, i.e., the life cycle and mode of reproduction, size of individual population and ecological status. Ex-situ techniques include the establishment of botanical and zoological gardens, banks of pollen, seed tissue culture, DNA, etc. Establishment of forest reserves, national parks, protected areas and on farm conservation of valuable plant varieties is being promoted to facilitate their in-situ conservation.

The present book comprises 29 contributions by eminent scientists and research workers who are acknowledged internationally in their respective fields. The book has been prepared with the intention of providing sufficient depth of the subject to satisfy the academic needs of the reader up to a higher level, which is comprehensive and interesting. There are articles on the various groups of plants, i.e., angiosperms, sedge vegetation, grassland vegetation, wetland flora, sacred groves, ethnobotany, pharmacognosy of drug-plants, phenology of medicinal plants, changing water regimes, hotspots and biodiversity conservation.

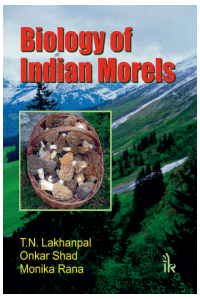
In totality, it contains useful information for the postgraduate students, teachers, scientists and researchers dealing with Basic and Applied Botany, Ethnobotany, Environmental Biology, Forestry and Agricultural Botany. Moreover, it will prove helpful for Government departments dealing with forestry, social forestry and the cultivation of medicinal plants.

Contents:

Biodiversity and Conservation: Salient Features/Biodiversity Hotsports: A Tool for Biodiversity Conservation/Perceptions of Villagers on Climate Change and its Adverse Effect on Biodiversity Depletion and Agro-Ecosystem of Selected Villages of District Rewari, Haryana/Protect Groves: A Traditional Way of Conserving Biodiversity in Garhwal Himalaya, Uttarakhand/Phytodiversity: A Medicinal Aspect/Biodiversity Conservation and Ecotoursim-Opportunities and Issues in Uttarakhand/Distribution, Phylogeny and Phytovhemistry of Ephedra: A Traditional Medicinal Plant/ Quantitative Assessment and Ethnobotanical uses of Plants of Koti-Kanasar Forest Range (Jaunsar) Uttrakhand/Forest Plant Biodiversity in the State of Uttarakhand/Economics of Crop Diversification: Uttarakhand State/Medicinally Important Endangered Orchid Habenaria Intermedia D.Don and H.edgeworthii Lindl: A Phenological Study/Ichthyodiversity of River Ramganga of Water Uttar Pradesh/Mapping of Forest Plantations in Forest Research Institute, Dehradun Using Aerospace Remote Sensing/Biodiversity and Conservation of Mangroves in the State of Orissa with Special Reference to Bhitarkanika/Invasive Alien Plant Species: A Threat to Native Biodiversity/Pollen Diversity of Higher Vascular Plants Growing in and Around Firozabad District of Uttar Pradesh: A Taxonomic View/Response of Higher Plant Biodiversity to SO2, Exposure/Diversity of Jatropha in India/Medico-Religious Plant Diversity of Uttar Pradesh/Floristic Diversity of Sikkim Himalayas with Notes on Ethnoveterinary Applications/Coal-Fired Industries and the Anthropecology of Plants - A Review/Biodiversity of Sadges in Wetlands of Gyanpur/Phytodiversity Conservation in India/Ethnobotanical Flora of Dewghat Forest, Uttar Pradesh: Need for Conservation/Muga Silkworm Biodiversity: A Profile/ Medicinal Plants: Local Heritage with Global Importance/Indigenous Traditional Knowledge of Medicinal Plant Biodiversity amongst Tribals of Rajasthan/Conservation of Phytodiversity Through In-Vitro Strategies/An Appraisal of the Diversity of Arborescent Plants of Doon Valley NW Himalaya/Index

Audience – Postgraduate students, teachers, scientists and researchers dealing with Basic and Applied Botany, Ethnobotany, Environmental Biology, Forestry and Agricultural Botany. Moreover, it will prove helpful for Government departments dealing with forestry, social forestry and the cultivation of medicinal plants.

Biology of Indian Morels



T. N. Lakhanpal
Onkar Shad
Monika Rana

ISBN: 978-93-80578-24-8/Year 2010
Size 18 cm × 24 cm/Pages 266
Hardback/₹ 1295.00

The morels is one of the most delicious and costliest wild eible mushrooms of the world. During the last century significant advances have been made in the study of morel biology with the sole aim of artificial cultivation. But all efforts to domesticate them have not been wholly fruitful. The book is an attempt to compile all the relevant information on morel biology so that more interest in morel research is stimulated ultimately paving the way for cultivation. The monograph contains 14 chapters; each chapter is devoted to and provides original information and observations on various aspects of morel biology. It begins with an overview of morel biology followed by the life cycle pattern, classical and molecular systematic treatment, ecology, physiology, mycorrhizal and rhizomorphospheric relationships, nutritive and nutraceutical profile, observations and ethno-mycological and sociobiological impact, cytology of ascus development and the culinary aspects of morel consumption. The objective is to offer a detailed account of different aspects of morel biology and biodiversity.

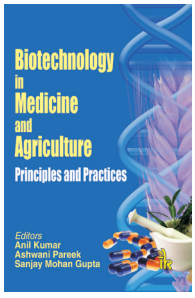
Contents:

Biology of Morels - An Overview/The Life Cycle Pattern/ Systematic Treatment of Morels - I/Systematic Treatment of Morels - II: Genotypic Polymorphism and Diversity/Ecological Aspects/Physiological Aspects of Morels/Nutritive Composition/ Nutraceutical Potential/ Rhizomorphosphere Relationships/Ethnomycological Aspects/ Sociobiological Aspects/Mycorrhizal Association of Morels/Cytology of Ascus Development in Morels/Culinary Aspects of Morels/ Annexure/References/Index.

Audience – Students of Biology and Agriculture.

Biotechnology in Medicine and Agriculture

Principles and Practimces



Editors

Anil Kumar
Ashwani Pareek
Sanjay Mohan Gupta

ISBN: 978-93-81141-40-3/Year 2013
Size 18 cm × 24 cm/Pages 1008
Paperback/₹ 895.00

This book would enable the students to develop interest and appreciate the role of biotechnology for future research and advancement of agriculture, veterinary, biomedical, industrial development and environmental protection for the welfare of society. The aim of this

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

book is not only to bring together the various fields of biotechnology, but also to present the basics behind each potential biotechnology in an understandable form. The book also attempts to compile some of the biotechnology processes for their easy access at a single platform which at present, is lacking. The target of the book is to give students a complete view of 'know-how' of biotechnology, especially those who have just ventured into this field and need a head start. Diverse biotechnologies with their basic principles along with there potential applications emerging in recent past are explained in very easy language and with the help of illustrations.

Contents:

Biotechnology: An Introduction/Section A: Biotechnology for Wider Applications — Recombinant DNA Technology/Nucleic Acid Probes Technology/Polymerase Chain Reaction Technology/DNA-Protein Interaction Technology/Genomics Technology/Proteomics Technology/Signalomics Technology/Metabolomics Technology/ Bioinformatics and *In Silico* Technology/System Biology Technology/ Microarray Technology/Anti-Sense Technology/RNA Interference Technology/Hybridoma Technology/Molecular Diagnostics Technology/Biosensor Technology/Nano-Biotechnology/Section B: Biotechnology for Crop Applications — Molecular Marker Technology in Plants/Marker Assisted Selection Technology/Plant Transgenic Technology/Bioinoculant Technology/Section C: Biotechnolgy for Health Applications — Molecular Marker Technology in Animal/ Embryo Tranfer Technology/Stem Cell Technology/Animal Transgenic Technology/Liposome Technology/Vaccine Technolgy/ Synthetic Biologicals Technology/Section D: Biotechnology for Indutrial Applications — Immobilized Biocatalyst Technology/ Bioprocess Technology/Section E: Biotechnology for Environmental Applications — Metagenomics Technology/Bioremediation Technology/Index

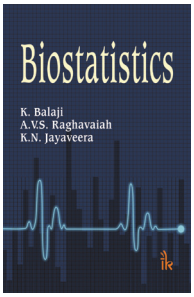
Audience – Undergraduate and postgraduate Molecular Biology and Biotechnology and Agriculture.

Biostatistics

K. Balaji
A.V.S. Raghavaiah
K.N. Jayaveera

ISBN: 978-93-81141-50-2/Year 2012
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 415.00

(See on page 187)



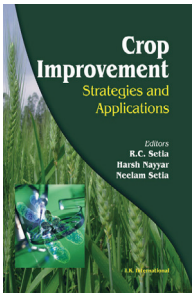
Crop Improvement

Strategies and Applications

Editors

R.C. Setia
Harsh Nayyar
Neelam Setia

ISBN: 978-81-89866-78-5/Year 2008
Size 18 cm × 24 cm/Pages 408
Hardback/₹ 1495.00



Te research in agricultural sciences is taking great strides with advancement in methodologies and techniques. It, therefore, becomes important to maintain pace as well as update oneself on the recent happenings in agricultural research. The present book is an effort to compile the recent information involving different articles pertaining to genomics, physiology, biochemistry, diseases and abiotic stresses. Thus, the chapters provide information on 'omics' of plants that covers genomics, proteomics and metabolomics, molecular techniques for crop improvement, gene silencing, marker-assisted selection for crops, biotechnology and genetic engineering for developing stress tolerant crops, elicitor biotechnology, salt stress effects, heavy metal stress and phytoremediation, genetics of wheat rust resistance, improvement of Brassicas, nutritional aspects of cereals and genetic transformation of fruit crops.

The book would be useful to the students and scientists working in the areas of agricultural research, and would provide current knowledge of diverse research areas through the reviews written by subject experts.

Contents:

The 'Omics' Technologies and Crop Improvement/Plant Genome Analysis: Current Developments/RNA Interference: A Novel Approach for Gene Silencing/DNA Based Methods for Variety Identification-Comparisonand Applications/Elicitor Biotechnology/ arker-Assisted Selection and Breeding: Potentials and its Applications in Some Major Crops/Genetic Control of Wheat Rusts in the Indian Sub-Continent/Genetics of Rust Resistance in Wheat: An Update/ Genetic Transformation in Fruit Crops/Biotechnological Approaches for Developing Stress Tolerant Crops: Current Developments and Prospects/Approaches to Enhance Salt Tolerance in Crop Plants: Progress and Prospects/Heavy Metal Toxicity in Plants and Phytoremediation/Climate Change and Plant Diseases/Recent Trends in the Management of Insect-Pests in Pulses/Indian Citrus Ringspot Virus-A Review/Recent Advances in Host-Parasite/Interaction: Chickpea Ascochyta rabiei and Biotechnology and Microbiology Botryfis cinerea Systems/Recent Trends in Oilseed Brassicas/Quality Characteristics, Nutritional Improvement and Product Development Properties of Grains/ Starch Metabolism in Plants: Potential Target for Crop Improvement/Regulation of Nitrate Reductase Activity Under Water Stress/Polyamines: An Overview and Prospects in Crop Improvement/Index.

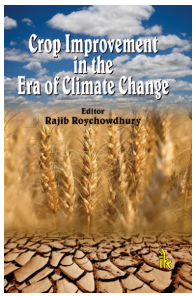
Audience – Students and Research Scholars in Agricultural Science.

Crop Improvement in the Era of Climate Change

Editors

Rajib Roychowdhury

ISBN: 978-93-82332-61-9/Year 2014
Size 18 cm × 24 cm/Pages 510
Hardback/₹ 3995.00



This book incorporates fast-moving research themes based on agricultural crop improvement and ongoing climate change in the present scenario. As time is going now, natural and cultivated habitats of crop plant are continuously disturbed; as a result, crop productivity and crop biology are affected continuously by climate change patterns like environmental hazards, abiotic stresses (water scarcity, salinity, heavy metals, oxidants, etc.), global warming, and others. This book is aimed at the overall crop improvement, beyond such kind of barriers, by agricultural processes, soil reclamation, fertilizer and biofertilizer applications, organic farming, hybridization and breeding programme, biotechnological approaches including genetic engineering, transgenesis and tissue culture, different 'omic' technologies. Thus, it covers a wide range of topics under environmental challenges, agronomy and agriculture processes, and biotechnological approaches. Chapters in this book are contributed by expert scientists, researchers, and academicians, from around the world who have worked on the challenging problem of achieving crop improvement in the variable environment. Every chapters deals with the theoretical as well as applied aspects of the concerned topics. This book will be especially useful to scientists and researchers engaged in crop production, crop improvement, plant breeder, agronomy, agricultural processes and biotechnology. It also deals with general concepts of climate change and environmental hazards. It will also be a valuable book for the graduate and postgraduate students specializing in crop science, plant biology, plant breeding, environmental science and biotechnology.

Contents:

Part A: Environmental Changes to Crop Improvement

An overview of climate change: causes, trends and implications/ Environmental hazards and crop cultivation/Response of plants to oxidative stress/Metal toxicity and tolerance in plants

Part B: Agronomy and Agricultural Process for Improving Crops

Soil salinity: mitigation strategies for crop improvements under global climatic conditions/Implications and ways to enhance nutrient use efficiency under changing climate/Crop diversification and conservation agriculture towards sustainable crop improvement in global scenario/Contingency crop planning for aberrant weather situations/Effects of climate change on crops: food Security and Biotechnology

Part C: Biotechnological Approaches to Crop Improvement

Crop hybridization in the era of climate change/Plant breeding tools and techniques for crop improvement programme: A conventional and modern approach/Molecular marker-assisted technologies for crop improvement/'Omics': Technique in modern agriculture for crop improvement/Transgenesis via genetic engineering: A crop improvemental approach/Tissue culture technology for crop improvement in the challenging environment/Tailoring of abiotic stress adaptive traits to diminish the effect of changing climate on crop productivity.

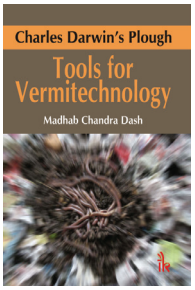
Part D: Implications of Advanced Technologies to Improve Demanding

Improvement of melon fruits using biotechnological strategies for the changing climatic conditions of the 21st century/Conventional breeding and biotechnological approaches in biodiesel crops for crop improvement in the era of climate change/Functional genomics and bioinformatics approach to understand regulation of abiotic stress in cereal crops.

Audience – Scientists, researchers, graduate and postgraduate students in crop science, plant biology, plant breeding, environmental science and biotechnology.

Charles Darwin's Plough

Earthworm Biology, Ecology and Tool for Vermitechnology



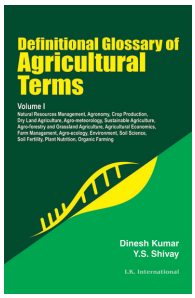
Madhab Chandra Dash

ISBN: 978-93-81141-27-4/Year 2012
Size 16 cm × 24 cm/Pages 196
Hardback/₹ 1795.00

(See on page 164)

Definitional Glossary of Agricultural Terms

Volume I



Dinesh Kumar
Y.S. Shivay

ISBN: 978-81-906757-3-4/Year 2008
Size 18 cm × 24 cm/Pages 326
Paperback/₹ 425.00

This volume includes the terms related mainly to agronomy, crop production, sustainable agriculture, agro-ecology, environment, soil science, soil fertility, plant nutrition, organic farming, latest concepts in agronomy, agro-forestry and grassland agriculture, agricultural economics and farm management, etc. It explains, especially the new terms, in a comprehensive and easy to understand way. Very often descriptive text, related terms, synonyms and antonyms are given in addition to the proper definition to help the reader to understand the term in its context and practical use. Although it is primarily a definitional glossary of agricultural terms used in India, but various terms in common use in other developing countries are also included.

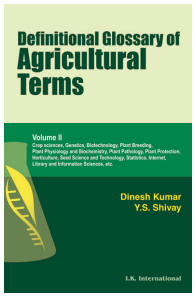
Contents:

Glossary of Natural Resources Management/Agronomy/Crop Production/Dry Land Agriculture/Agro-meteorology/Sustainable Agriculture/Agro-forestry and Grassland Agriculture/ Agricultural Economics/Farm Management/Agro-ecology/Environment/Soil Science/Soil Fertility/Plant Nutrition and Organic Farming.

Audience – Biology & Agricultural Science students.

Definitional Glossary of Agricultural Terms

Volume II



Dinesh Kumar • Y.S. Shivay

ISBN: 978-81-906757-4-1/Year 2008
Size 18 cm × 24 cm/Pages 324
Paperback/₹ 425.00

This volume includes the terms related to crop sciences, e.g. genetics, biotechnology, plant breeding, plant physiology and biochemistry, plant pathology, plant protection, horticulture, seed science and technology, statistics, internet, library and information sciences, etc. Very often descriptive text, related terms, synonyms and antonyms are given in addition to the proper definition to help the reader to understand the term in its context and practical use. Useful information pertaining to cell biology, agronomy, soils, soil fertility, manures and fertilizers, organic farming and crop residues, etc. have been presented in tabular form. Tables relating to symbols, units of measurements and conversion factors are also provided.

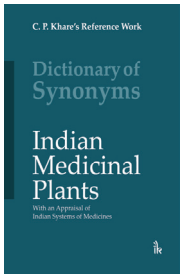
Contents:

Glossary of Crop sciences, Genetics, Biotechnology, Plant Breeding, Plant Physiology and Biochemistry, Plant Pathology, Plant Protection, Horticulture, Seed Science and Technology/Glossary of Statistics/Glossary of Internet, Library and Information Science/ List of Tables: Cell Biology/Agronomy, Crop Production, Soils, Soil Fertility, Manures and Fertilizers, Organic Farming, Crop Residues, Symbols, Units of Measurements and Conversion Factors.

Audience – Biology & Agricultural Science students.

Dictionary of Synonyms Indian Medicinal Plants

Incorporating a Critique on Indian Medicine



C.P. Khare

ISBN: 978-93-81141-24-3/Year 2012
Size 16 cm × 24 cm/Pages 728
Hardback/₹ 1995.00

All the medicinal plants incorporated in "Dictionary of Synonyms: Indian Medicinal Plants" have been studied for their medicinal properties and qualify for further research in modern labs. This work should not be confused with an exhaustive compilation on agro-forestry nor with a detailed document on botany. The purpose is to provide leads to scholars who are well-versed in folk and indigenous nomenclature, but are not able to reach the latest scientific literature, which is being organized by Latin or English names. This work will also serve as a guide to modern scientists who would like to correlate scientific nomenclature with the indigenous one, to understand and make the best use of ground realities for herbal drug development.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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In the text, Indian common and folk names have been spelled according to their actual pronunciation.

This reference work, I think, would be useful to all scientists in the field of medicinal plants as well as phytomedicine, to those interested in using Ayurvedic herbs with more confidence in their practice and to physicians and clinicians who are interested in the alternative and adjunctive therapies (excerpt from Foreword).

– Dr. Neeraj Tandon, Head, Medicinal Plant Unit, Indian Council of Medical Research Ministry of Health & Family Welfare, Govt. of India.

The Dictionary is the first reader-friendly, one volume source of properly identified botanical and common English synonyms of Sanskrit, Arabic, Persian, Tamil and folk nomenclature. This will facilitate the globalization process of Indian medicine and lead us to the vast research material of botanical medicine.

– V.K. Agarwal. Ph.D. (Clinical Pharmacology)

The Dictionary reveals the hidden common bonds in Ayurvedic, Unani and Siddha medicines, and removes the stigma of Hindu or Islamic (the epithets were used by even Col. R.N. Chopra) or a geographically divided medicinal system. It will help us in reorganizing our resources for a better coordinated effort

– V.C. Burman Chairman Emiratus, Dabur India

The Dictionary will erase the dividing lines of various Indian classical systems and bring therapeutically validated herbs under one umbrella. One Indian herbal medicine will ultimately emerge. This process has already been initiated by a number of pharmaceutical companies in India, even by those who remained confined to classical formulations for decades.

– Dr. S.K. Mitra, M.D., Former Executive Director, R&D, Himalaya Drug Company

Asiatic Society's markings have now become obscure and obsolete. It is a welcome change that Roman transcription of Sanskrit names is based on the first initiative of Rashtriya Ayurveda Vidyapeeth (National Academy of Ayurveda).

– Dr. V.V. Prasad, M.D (Ayur.), Ph.D., Director, Rashtriya Ayur Vidyapeeth

For the first time, we got correct Roman transcription of Unani names. In almost all reference works, Unani names in English have been misspelt.

Prof. (Hakeem) Anwar Ahmad, Former Head, Unani Medicine, University of Delhi

Herbal drug development critically depends upon the proper botanical identity of Ayurvedic, Unani and Siddha classical herbs. The Dictionary has utilized all possible resources to achieve this.

– Dr. Arun Gupta, M.D.(Pharmacology)

The critical appraisal of Indian systems of medicines is bold, forthright and unbiased to a great extent, at least succeeded in initiating a discussion on many a controversial issue which needed a hard look.

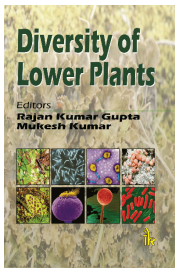
– Dr. Prem Kishore, Former Director, Central Council for Research in Ayurveda & Siddha

Contents:

Scientific Inquiry into Indian Medicine / An Effort to Modernise the Ayurvedic Classical Concepts / Unani Medicine: Research within Fundamental Framework / Siddha Medicine (Slowly Moving towards Scientific Validation) / Drug Variants of Indian Medicine (Predominantly Classical) / Standardization of Herbal Drugs in India / Improving Shelf-life of Herbal Medicine through Microcosm / Pruning Process of Indian Polyherbal Formulations / Experimental Studies in India (Scientific Edge Over Classical Concepts) / Adverse Effects of Ayurvedic Plant Drugs / Synonyms by Botanical Names / Synonyms by Indian Names / Index.

Audience – Students and scholars in medicine research, Herbal, Ayurvedic, Unani and Siddha systems of medicine and pharmacologists.

Diversity of Lower Plants



Editors

Mukesh Kumar • Rajan Kumar Gupta

ISBN: 978-93-82332-41-1/Year 2014
Size 18 cm × 24 cm/Pages 360
Hardback/₹ 2995.00

Biodiversity is the variation of life forms within a given ecosystem, biome or for the entire earth. Biodiversity is often used as a measure of the health of biological system. Biodiversity or biological diversity is the sum of all the different species of animals, plants, fungi, and microbial organisms living on earth and the variety of habitats in which they live. Scientists estimate that upwards of 10 million—and some suggest more than 100 million—different species inhabit the earth. Each species is adapted to its unique niche in the environment, from the peaks of mountains to the depth of deep-sea, hydrothermal vents, and from polar ice caps to tropical rain forests.

Biodiversity is also described as some of the fascinating varieties of organisms and complex ecological relationships that give the biosphere its unique, productive characteristics. The biodiversity found in earth consists of many millions of distinct biological species. Biodiversity is not distributed evenly on earth, but is consistently rich in the tropics and in specific localized regions it is less rich in polar regions where fewer species are found. Humans and most other animals are almost totally dependent on plants, directly or indirectly, as a source of energy through their ability to convert the sun's energy through photosynthesis.

The algae, fungi, mosses, lichens and liverworts, collectively known as lower plants, are the unsung heroes of natural history. Lower plants are at the heart of our life support system." "Without lower plants, the rest of the living world couldn't function. We have left their existence to chance in the past but we now have to take positive action to conserve their immense diversity."

Keeping in mind the above thought the present book has book compiled which consists of wide ranging 26 articles encompass topics which emphasizes on various aspects of diversity of algae, cyanobacteria, bacteria, pathogenic bacteria, fungi, lichens, bryophyte, pteridophte, etc. The information incorporated in the book is provided by the authors who are internationally acknowledged experts in their field. The book has been written with the intention of providing a sufficient depth of the subject to satisfy the needs at a level which will be comprehensive and interesting. We have tried to synthesize all the information which will be useful to the students, teachers, scientists and researchers in the field of biodiversity of lower plants.

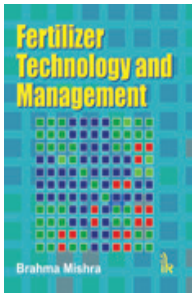
Contents:

Biodiversity: Distribution, Conservation and Economic Importance/ Microbial Diversity for Sustainable Crop Production in Hill Region/ Cyanobacterial Biodiversity: A Profile/Freshwater Cyanobacterial Diversity of Doon Valley/Physico-Chemical Parameters in Relation to the Distributional Pattern of Cyanobacteria/Extremophilic Bacteria and Microbial Biodiversity/Pathogen Biodiversity: Its Origen, Nature, Charectarization and Control/Diversity of Wood Rotting Basidiomycetes of Kumaon and Garhwal/Cyanobacterial Biodiversity and Ecostrategy/Biodiversity of Chilika Lake, East Coast of India/ Strategies for Sustainable Biodiversity Conservation/Diversity of Phytocystatins: The New Age Healers/Aquatic Diversity: Nature and Characterization/Threats to Phytodiversity/Himalayan Biodiversity with Reference to Uttarakhand and its/Intellectual Property Rights (IPR): An Effective Tool to Protect Indigenous Technical Knowledge/ An Updated List of Pteridophytes of Uttarakhand/Biodiversity of Powdery Mildew Fungus: A Constant Threat to Cucurbits/The Role of Cyanobacterial Biodiversity Resources in Agricultural Sustainability/ Algae: General Aspects, Ecological Relationships and Economic Values/Distribution Pattern of Terricolous Lichens in Garhwal Himalayas (Chopta-Tungnath Tract) with Reference to Morphological and Environmental Variables/Bryophytes and Ecosystem/

Biodiversity and Conservation Needs in Uttarakhand Himalaya: A Case Study of District Rudraprayag/Diatom: Occurrence, Structure and Application/Biodiversity and Biotechnology/Mycorrhiza: A Symbiotic Fungi/Index

Audience – Students, teachers, scientists and researchers in the field of biodiversity of lower plants.

Fertilizer Technology and Management



Brahma Mishra

ISBN: 978-93-80026-35-0/Year 2012
Size 18 cm × 24 cm/Pages 196
Paperback/₹ 345.00

Fertilizer Technology and Management provides an introduction to the manu-facture, marketing and management of commercial fertilizers. It covers the principles and methods of fertilizer production including raw material requirements and intermediaries, fertilizer marketing, and all aspects of fertilizer management such as quality control, logistics and application methods.

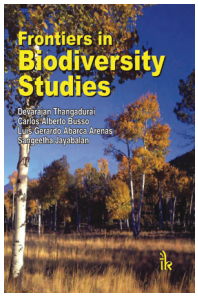
The book also includes chapters on the role of fertilizers in agriculture, long-term effects of fertilizers on soil productivity and impact of fertilizer production and use on the environ-mental quality. The subject matter in all the chapters has global perspective with emphasis on developing countries and Indian conditions. Drawing on the author's long experience of teaching and research in the field of fertilizer science and soil fertility, this book has been designed as textbook for the students of Agricultural Sciences and allied subjects including Agribusiness Management and Environmental Science in the universities and colleges. The professionals involved with any phase of fertilizer production, marketing and use will find this book useful.

Contents:

Role of fertilizers in agriculture/Feedstocks and raw materials/ Acids used for fertilizer production/Ammonia production/Nitrogen fertilizers/Phosphate fertilizers/Potash fertilizers/Complex and mixed fertilizers/Secondary nutrient fertilizers/Micronutrient fertilizers/ Fertilizer quality control/Fertilizer marketing/Fertilizer logistics/ Fertilizer application/Long-term effects of fertilizer use/Fertilizers and environmental pollution/Index

Audience – Students of Agricultural Sciences and allied subjects including Agribusiness Management and Environmental Science. Professionals of fertilizer production and marketing.

Frontiers in Biodiversity Studies



Editors

Devarajan Thangadurai
Carlos Alberto Busso
Luis Gerardo Abarca Arenas
Sangeetha Jayabalan

ISBN: 978-93-81141-52-6/Year 2012
Size 18 cm × 24 cm/Pages 440
Hardback/₹ 1995.00

To use biodiversity components sustainably, to maintain ecosystem functions that provide goods and services, to conserve, protect and restore the natural world to halt biodiversity loss, it is vital to understand and conserve the diversity of life on earth through research, education and outreach. Several international initiatives such as BIOTA, ERA-Nets, CBD, DIVERSITAS, GBIF, GTI, MEA, GEOSS and GEO promote scientific research, conservation and sustainable development of available biodiversity components in the recent years, as the present form of globalization has heavily been criticized for ignoring sustainable development and environmental concerns. More recently, helping species and ecosystems to survive becomes practically more difficult.

The remarkable discovery of new species shows that there is still much to discover and makes conservation more important for the future generations. There has now been increasingly substantial and largely irreversible loss in the diversity of life on earth, currently threatened with extinction due to anthropogenic activities. Recently, IUCN notes that 1 bird out of 8, 1 mammal out of 4, 1 amphibian out of 3, and 6 marine turtles out of 7, are all threatened with extinction. One of the most comprehensive and recent study estimates that over a million species often within the borders of a single country will be lost in the next five decades. And so, assessing the causes and consequences of loss of biodiversity and the importance of conservation and sustainable use of biodiversity are the major challenges essential for our very survival on the earth.

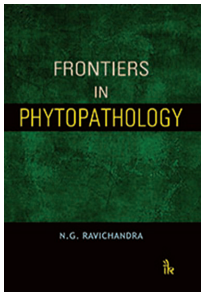
Frontiers in Biodiversity Studies has wide range of such topics including the biodiversity of aquatic mollusks, freshwater ciliates, wild legumes, dipterans, coastal and freshwater fishes, mangroves, phytopathogenic fungi, terrestrial heteropterans and insect communities, habitat loss, fragmentation, land use-land cover change, ecological agriculture, ecosystem services and their value to society. The updated reviews serve as capital in supporting food security, agricultural productivity and environmental management for the ever increasing global population in the 21st century.

Contents:

Species diversity of aquatic molluscs in mountain lakes of the Eastern Alps in Austria: An exemplary study/ The chasmogamous/ cleistogamous mixed breeding system, a widespread and evolutionarily successful reproductive strategy in angiosperms/Ecological agriculture: Strategy for sustainable development/Freshwater Ciliates (Protozoa, Ciliophora) from Argentina: An annotated and updated compilation/Towards the integration of culture collections/Higher-taxa as surrogates for species richness in terrestrial heteropterans of South American grasslands/Improvement in conservation value of insect communities in South Patagonian forests managed with variable retention/Legume diversity in the extra Andean Patagonia/ Physiological and morphological traits of *Trichloris crinita* in the semi-arid zones of Argentina/Physiological traits on *Osmorhiza depauperata*, a biodiversity component in the *Nothofagus* forests of Southern Patagonia/Dipteran diversity in cattle pastures and rangelands of Washington State, USA/Distribution and biogeographical notes of coastal fish fauna of Veracruz, Mexico/Seasonal analysis of the ichthyofauna at three subsystems of the Alvarado lagoon, Veracruz, Mexico/Habitat loss and fragmentation in landscapes of the ramsar site, Alvarado lagoon system/The mangrove forests of Mexico: Transformation, conservation and threats/Trends of land use-land cover change in a complex tropical wetlands landscape: The case of the Chetumal, Mexico and Corozal Bay, Belize/An annotated checklist of *Crotalaria* L. (Fabaceae) in India/Fish distributional patterns in Greek rivers/The diversity and distribution of *Pleospora* (Pleosporaceae) in Maharashtra, India/Diversity of phytopathogenic conidial fungi of protected nature territories in Ukraine: Study toward elaboration of conservation strategy/Subject Index

Audience – Natural Scientists, Environmentalists, Conservationists, Taxonomists, Biodiversity Professionals, Policy Makers, Stakeholders and anyone working on Biodiversity Research and Applications.

Frontiers in Phytopathology



Dr N.G. Ravichandra

ISBN: 978-93-85909-06-1/Year 2017
Size 16 cm × 24 cm/Pages 1040
Paperback/₹ 1595.00

The necessity of a book which gives a comprehensive account of new topics along with latest information on established topics in phytopathology has been felt ever since

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the significance of an interdisciplinary approach has been realized. The purpose of this book is to provide facts so that the readers are introduced to the details of the newer aspects in phytopathology as well as recent information on a few major existing aspects. It comprehensively deals with of some fresh, less discussed topics like Plant Pathology in the 'Omics' Era, Plant Disease Diagnostic Kits, Plant Quarantine and Pest Risk Analysis, Biosafety and Biosecurity, Intellectual Property Rights (IPR) and World Trade Organization (WTO) in relation to Phytopathology, Nanotechnology in Plant Disease Management and Innovations in Teaching, Research and Extension in Plant Pathology.

This book is mainly designed to meet the requirement of students, teachers, research workers, extension personnel, policy makers and several industries concerned with plant diseases apart from all those interested in phytopathology

- The route of the changing path, the new 'Omic' technologies pertaining to plant pathogens and their significance have been dealt in detail in the first chapter.
- The chapter on 'Plant Disease Diagnostic Kits' discusses individual kits available globally to diagnose plant diseases. Useful information on the present scenario of teaching, research and extension in plant pathology has been furnished along with the limitations and future vision for further improvement.
- Of late, there have been phenomenal developments in major aspects of phytopathology including pathogenesis, defense mechanisms in plants and epidemiology. Such advancements in these fields have been discussed with more emphasis on the molecular aspects.
- There is a dearth of detailed published information on aspects like quarantine, biosafety, IPR and WTO, and nanotechnology in relation to plant pathogens. An attempt has been made to fill this gap.
- Each chapter is well supported by convincing tables, appropriate diagrams and illustrations at right places.
- A detailed bibliography provided at the end of the book will help in further reading.

Contents:

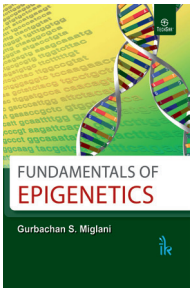
Plant Pathology in the 'Omics' Era/ Pathogenesis/ Defense Mechanism in Plants/ Epidemiology/ Plant Disease Diagnostic Kits/ Plant Quarantine and Pest Risk Analysis/ Biosafety and Biosecurity/ Intellectual Property Rights (IPR) and World Trade Organization (WTO) in Relation to Phyto-pathology/ Nanotechnology in Plant Disease Management/ Innovations in Teaching, Research and Extension in Plant Pathology/ Bibliography/ Index

Audience – Students, Teachers, Researchers and Extension Workers in particularly in Phytopathology and generally in Agriculture. Policy makers and industries related to the field of phytopathology.

Fundamentals of Epigenetics

Gurbachan S. Miglani

New



ISBN: 978-93-90620-97-5/2023
Size 18 cm × 24 cm/Pages 728
Hardback/₹ 3995.00

Fundamentals of Epigenetics provides concise yet complete information on the many aspects of the basic and most recent concepts in epigenetics, a branch of life science that deals with the mechanisms such as DNA modifications, histone modifications, RNA modifications, small and long non-coding RNAs, chromatin remodeling, which are involved in epigenetic control of gene expression without involving variations in DNA sequences. These regulatory mechanisms lead to phenotypic variations. These epigenetic mechanisms can be exploited for crop improvement and cure of human diseases.

This book is primarily designed for undergraduate and graduate level students studying epigenetics in conventional, agricultural and medicinal universities. Teachers and researchers in any discipline of life sciences, agricultural sciences, medicine, and biotechnology, molecular epigenetics and biotechnology will also find it useful as a reference book.

Salient Features:

- A brief historical background for every chapter
- A concise yet complete treatise covering all essential aspects of epigenetics
- Up to date progress in the subject discussed
- Nobel Prize winning work finds a special mention
- Based on more than 3100 references.
- Supported by 27 tables and 186 figures
- Includes glossary comprising of 550 terms carefully defined in context of the present-day knowledge in the subject
- Thought provoking problems listed at the end of each chapter
- Applications, implications, advantages, disadvantages, limitations, and future prospects of various discoveries and methodologies
- Useful for national and international level competitive examinations, entrance tests, and interviews
- Detailed subject index

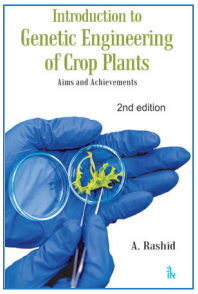
Contents:

Introduction to Epigenetics/DNA Modifications/Histone Modifications/Functions of Histone Modifications/DNA, Histone and Nonhistone Protein Modifications in Gene Expression/RNA Modifications in Gene Expression/Epigenetic Modifiers/Epigenetic Crosstalk and Epigenetic Signals/Epigenetic Inheritance/Long and Small Non-coding RNAs/MicroRNAs and Short Interfering RNAs/ RNA-Directed DNA Methylation and Epigenetic Reprogramming, Learning and Memory/Chromatin Remodelling/Epigenetic Control of Gene Expression/RNA Interference/Epigenetic Gene Silencing/ Epigenetics in Crop Improvement/Glossary/Index

Audience: Graduate & Postgraduate of Agriculture Science.

Introduction to Genetic Engineering of Crop Plants

Second Edition



A. Rashid

ISBN: 978-93-86768-44-5/Year 2019
Size 16 cm × 24 cm/Pages 320
Paperback/₹ 525.00

Sine the publication of the first edition of this book in 2009, a lot of crucial information has surfaced with the help of recent researches the world over. Hence, the need to revise the edition. This new edition has been duly updated and thoroughly overhauled.

Two new chapters "Genetic Engineering by Agrobacterium rhizogenes (A Novel Approach in Genetic Engineering of Plants)" and "Terminator Gene Technology (A Betrayal to Genetic Engineering of Crops)" have been added. "Conclusion" in the end of the book dealing with various non-technical facets of Agricultural Biotechnology is also a new section in the present edition.

Transgene technology since its inception, about three decades ago, has progressed rapidly providing platform for discovery, product design and novel plants which are improved source of food, feed, chemicals and drugs. This knowledge is changing rapidly by which plants develop their architecture to survive abiotic and biotic stress, and become resistant to herbicides, pests and pathogens. Also, the scene is set for a change from traditional farming to molecular farming. Moreover, gene silencing from a bane has turned out to be a boon, opening new vistas in genetic engineering of crop plants.

In this book one will find an up-to-date account of aims and achievements of genetic engineering of crop plants. This book is an

essential reading for the undergraduate and postgraduate students of Botany, Biotechnology and Agriculture.

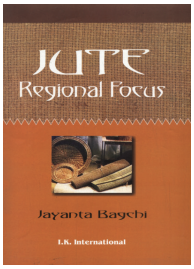
Contents:

Genetic Engineering: Science and Technology/*Agrobacterium tumefaciens* Genetic Engineer in Nature (Genetic Engineering: A Copy Nature Approach)/Genetic Engineering by Agrobacterium rhizogenes (A Novel Approach in Genetic Engineering of Plants)/Direct Delivery of DNA for Transformation/Engineering for Herbicide Resistance/Engineering Resistance to Pests/Engineering Resistance to Pathogens/Engineering for Stress Tolerance/Engineering of Primary Metabolism/Engineering of Secondary Metabolism/Molecular Farming/Engineering of Plant Development and Differentiation/Gene Silencing: From Bane to Boon/ Terminator Gene Technology (A Betrayal to Genetic Engineering of Crops)/Conclusion/Index.

Audience – Undergraduate and Postgraduate students of Botany, Biotechnology and Agriculture.

Jute

Regional Focus



Jayanta Bagchi

ISBN: 978-81-88237-76-0/Year 2006
Size 14 cm × 22 cm/Pages 260
Hardback/₹ 995.00

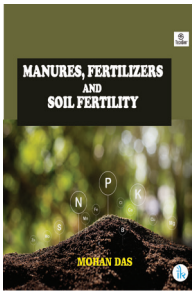
The book identifies the components of regional cooperation and investigates the importance and indispensability of regional cooperation with reference to critical issues in the jute sector, besides highlighting the specific areas where some jute producing countries have contributed significantly.

Contents:

Introduction/Regional Profile: Countries and Position/Research & Development and Export Profile/Relevance of Regional Co-operation/ Relevance of Regional Co-operation/Relevance of Regional Co-operation in Ensuring Remunerative Prices to the Growers/Jute and Synthetics: Analysis of Jute's Competitive Strength/Possibilities for Cost Reduction/Feasibility of Production Harmonisation/ Buffer Stocking and its Feasibility/Jute and Environment/Specific Areas in which Regional Co-operation can be Operational for Jute/ Achievements of International Jute Organisation/Diversification and Products/Current Situation in India – Areas where India can Contribute/Maintenance of Appropriate Prices/Conclusion/ Appendix : The Nature of Jute and Kenaf Fibre / Bibliography/Index

Audience – General readers.

Manures, Fertilizers and Soil Fertility



New

Mohan Das

ISBN: 978-93-90620-58-6/Year 2023
Size 18 cm × 24 cm/Pages 256
Paperback/₹ 425.00

Organic manure is the decomposition product of dead plant and animal residues, which is added to soil to enrich soil fertility. All the decomposable residues can be made into manure including human and animal excreta.The text book "Manures, fertilizers and soil fertility" is a comprehensive textbook comprising of eleven chapters that cover the prime areas comprise of manures, fertilizers and soil fertility, thoroughly covering the syllabus, sequentially arranged, which imparts broad knowledge on three important areas of soil fertility management viz., manures, fertilizers and soil fertility.

This book will be useful for undergraduate students in the field of soil fertility and its management at various agricultural/horticulture universities.

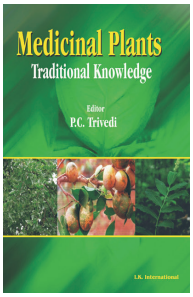
Salient Features:

- New illustrations, graphs, diagrams, figures and data are given for easy understanding.
- End chapter questions are included.
- Essential Information on manures, fertilizers and soil fertility.
- Written in easy, simple and lucid language

Audience: Undergraduate and Postgraduate students in Agricultural Science.

Medicinal Plants

Traditional Knowledge



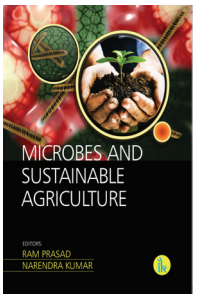
Editor

P.C. Trivedi

ISBN: 978-81-88237-62-3/Year 2006
Size 18 cm × 25 cm/Pages 272
Hardback/₹ 995.00

(See on page 168)

Microbes and Sustainable Agriculture



Dr. Ram Prasad
Dr. Narendra Kumar

ISBN: 978-93-85909-48-1/Year 2017
Size 18 cm × 24 cm/Pages: 364
Hardback/₹ 2295.00

Microbes and Sustainable Agriculture covers recent spate of research, highlighting the major role of microbes in agriculture sustainability. It explains the role of bacteria, cyanobacteria and fungi in diverse facets of agriculture to preserve the sustainability including arbuscular mycorrhizal association, microbial biopesticides, heavy metal resistant bacterial strains, herbicides for weed management, biochar and its role in soil fertility management and plant disease management.

This book is designed for undergraduate, postgraduate and research students working or interested in agricultural microbiology; and to serve as a reference for scientists, professionals and engineers in this field.

Salient Features

- Presented in 16 chapters, the main pillar of the book is to examine and highlight the various roles that microbes play in agricultural sustainability. The interdisciplinary treatment of the topics in a synthesized manner makes this book an useful resource guide for agricultural scientists.
- Explores the relationship between microbial use in different agricultural practices like use of biofertilizers, pesticides, for the reclamation & restoration of soil and plant disease management.
- Some of the chapters serve as a complete case study individually and have the scope for application in habitats with similar problems.

Contents:

Arbuscular Mycorrhizal Association Improves Secondary Metabolite Production in Medicinal and Aromatic Plants: A Sustainable Approach/ Microbial Biopesticides with a Focus on Bacillus thuringiensis and Baculoviruses/ Rhizobacterial Efficacy for Sustainable Crop Productivity in Agroecosystems/ Heavy Metal Resistance Bacterial Strains from Agricultural Polluted Sites of Northern India/ Microbial Metagenomics: Herbicides for Weed Management in Sustainable Agriculture/ Biodegradation of Petroleum Hydrocarbon Pollutants in Marine Environments/ Biochar and its Role in Soil Fertility Management/ Resource - Conserving Agriculture and Role of Microbes/ Secondary

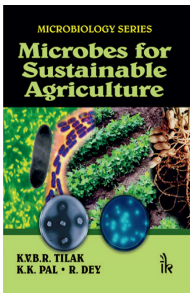
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Metabolites: A Gift of Natural Weapon for Defense Mechanism in Plants/ Role of Arbuscular Mycorrhizas in Sustainable Management of Agricultural Ecosystem/ Compatible Solute in Relation to Microbes and their Biotechnological Significance/ Plant Disease Management through Microbial Agents for Sustainable Agriculture/ Micro-algal and Physicochemical Studies of Wetland Soil in Keoladeo National Park, Bharatpur, Rajasthan (India)/ Competent Soil Microorganisms for Agricultural Sustainability: New Dimension/ Mutant of Cyanobacteria Proved to be Better Biofertilizer/ Reclamation of Saline Soil Using Vermicomposting For Sustainable Agriculture

Audience – UG and PG level, agricultural universities, industrial microbiology, microbial biotechnology, microbial ecology, applied microbiology and plant pathology. Also acts as a reference book for scientists, professionals and engineers in this field.

Microbes for Sustainable Agriculture



K.V.B.R. Tilak • K.K. Pal
Rinku Dey

ISBN: 978-93-80026-88-6/Year 2010
Size 18 cm × 24 cm/Pages: 212
Paperback/₹ 325.00

The present book comprising 16 chapters covers various aspects of micro-organisms as natural resources for sustainable agriculture. The composition of media used for culturing the microorganisms and methods are also enlisted in this book. Figures with updated information is also a salient feature of this book. Selected references, suggested readings, glossary of terms used is given at the end of the book.

The book is written as per the syllabi of the various universities. This will form a textbook for both UG and PG level of traditional universities, agricultural universities, industrial microbiology, microbial biotechnology, microbial ecology, applied microbiology and plant pathology. This also forms a very good source for general reading for all categories including the candidates appearing for various competitive examinations.

Contents:

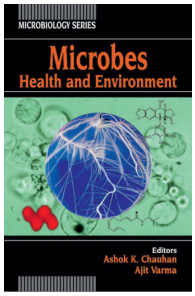
Biological Nitrogen Fixation/Legume (Rhizobium) Inoculants/ Free-Living Nitrogen Fixers/Azospirillum Inoculant/Endophytic Bacteria/Plant Growth Promoting Rhizobacteria (PGPR)/Blue-Green (Cyanobacterial) Inoculants/Azolla Biofertilizer/Phosphate Solubilizing Microorganisms/Actinorrhizal Associations/ Mycorrhizae/Organic Matter Recycling and Composting/ Organic Farming/Biological Control/Biomethanation/Molecular Techniques for Ecological Studies/Appendix 1: Media/Appendix 2: Some Universal Methods for Detection and Quantification of Plant Growth Promoting Attributes of Rhizobacteria/Selected References and Suggested Reading/Glossary/Index.

Audience – Undergraduate and Postgraduate level of traditional universities, agricultural universities, industrial microbiology, microbial biotechnology, microbial ecology, applied microbiology and plant pathology.

Microbes

Health and Environment

Editors



Ashok K. Chauhan
Ajit Varma

ISBN: 978-81-88237-51-7/Year 2006
Size 16 cm × 25 cm/Pages 448
Hardback/₹ 1995.00

Microbes: Health and Environment highlights the interrelatedness of microbes with life and environment. It stresses that microbes have a beneficial impact on human life and environment. It covers the various aspects of microbes such as molecular biology, interrelationships, microbial intervention in our environment, microbial biotechnology, genetics, their immunology, biochemistry, economic importance, interaction with medicinal plants, human beings, industrial relevance, influence on our health and so on. It is an asset for enterprising students, teachers and scientists.

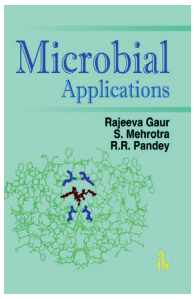
Contents:

Impact of Microorganisms on Environment and Health/Synergism between Medicinal Plants and Microbes/*Gloriosa superba* L.: Biology and Biotechnological Strategies for Conservation/Antimicrobial Activity of Some Ayurvedic Plant Drugs: An Appraisal of Evidence Based Researches/Cyanobacteria for Soil Health and Sustainable Agriculture/Cyanobacterial Secondary Metabolites: Emerging Trends and Prospects/Interactions between the Physical and Biological Environment in Relation to Soil Health/*Clostridium botulinu*: The Source of Bioterror and Beauty/Forms and Functions of Plant Growth Promoting Rhizobacteria/Microbial Population and Biomass C and N in the Rhizosphere of *Albizia lebbeck* L. and *Gmelina arborea* Roxb. in a 'Jhum' Fallow in Northeast India/Effect of Co-inoculation of AM fungi and *Bradyrhi-zobium japonicum* on Nodulation, Nitrogen and Phosphorus Content in Soybean/Fungal Protoplasts: Impediments on Biotech-nology/Fungal Phytases in Ameliorating Nutritional Status of Foods and Combating Environmental Phosphorus Pollution/Intervention in Arsenic Rich Environment/Applications of Alkalistable, Thermostable and Xylanostable Enzymes in Paper Industry/Bioleaching and Microbial Mineral Degradation/ Environmental Benefits of Xylanase-Assisted Prebleaching of Kraft Pulps/Index.

Audience – Postgraduate and Research Students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology

Microbial Applications

Editors



Rajeeva Gaur • S. Mehrotra
R. R. Pandey

ISBN: 978-93-81141-01-4/Year 2012
Size 18 cm × 24 cm/Pages 388
Hardback/₹ 1595.00

Increasing importance of the subjects like Microbiology, Biochemistry, Biotechnology and Environmental Science envisages elaborate and consolidated information on these modern disciplines of science. There is an urgent need to integrate all these disciplines to devise a truly interdis-ciplinary branch of science that caters to the need of all those who are genuinely interested to solve the multifaceted problems faced by the mankind. Therefore, this book is a step forward in the direction of integrating the aforesaid frontline branches into an interdisciplinary course quenching the academic thirst of all those concerned.

Microbial Applications aims to provide information to both undergraduate and postgraduate students studying in various fields of Life Sciences. Though an edited book it has been designed in such a way that even beginners in the field, who are not well acquainted with the problems mentioned in the individual chapters, can also easily grasp the subject.

This book includes twenty-two chapters related to applications and deleterious aspects of microorganisms including utility of A. pullulans in industry, symbiotic nitrogen fixation, microbial enzymes, probiotics, microbes in heavy metal remediation, immunosensor, role of bioinformatics in microbiology, biofertilizers, and microbes as

source of plant growth promoting factors etc. Each chapter provides introductory description on the topic followed by a detailed account. All the topics covered in the book are dealt with sound scientific footing. Different chapters were invited from specialists in the concerned disciplines. It is expected that this will cater to the needs of science students.

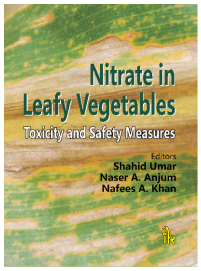
Contents:

Biology, distribution and utility of Aureobasidium pullulans/ Microbial laccases: Occurrence, properties and applications/Bacterial protease inhibitors/Exploitation of microbes and microbiols in pest management: Current status and future prospects/Microbial interactions and control of bacteria and phytopathogenic fungi/ Probiotics: Role in fodder technology/Structure and function of HIV/ GMM food: Problems and perspectives/Role of fungi in production of ergot alkaloid/Role of bioinformatics in microbial studies/Microbes for heavy metal remediation/Microbial degradation of pesticides/ Microbial degradation of sulfide in aerobic and anaerobic conditions/ Bioinformatics in microbiology: An introduction/Biofertilizers and plant growth promoting rhizobacteria./Biosensors: A real time analytical tool/Immunosensor: A new strategy in detection and analysis of biomolecules/Bacterial resistance in mercury and its bioremediation in contaminated environment/Role of phosphate solubilizing microorganisms in agriculture/Microorganisms for improving productivity and quality in horticultural crops/Studies in Rhizobium association with Sesbania species: an important green manure crop/Applications of microorganisms in nanotechnology/ Index.

Audience – Undergraduate and postgraduate students of Life Sciences.

Nitrate in Leafy Vegetables

Toxicity and Safety Measures



Editors

Shahid Umar • Naser A. Anjum
Nafees A. Khan

ISBN: 978-93-82332-21-3/Year 2013
Size 18 cm × 24cm/Pages 222
Hardback/₹ 1595.00

The present book represents the first comprehensive compilation of the latest science of the dietary nitrate sources, potential human health effects and sustainable remedial strategies. This book provides practical, data-driven resources based upon the totality of the evidence to help the reader understand the basics, treatments, and preventive strategies that are involved in the understanding all about nitrate in plants and humans. The overarching goal of the scholarly chapters contributed by worlds' recognized subject-authorities is to provide fully referenced information to plant scientists and health professionals; so that they may have a balanced perspective on the known and potential excess nitrate consumption, and also on the value of various preventive and treatment options that are available as well as will be in the foreseeable future.

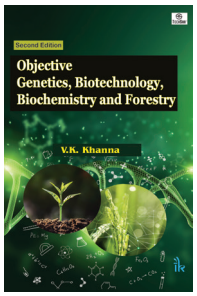
Contents:

Contribution of Leafy Vegetables to Dietary Nitrate Intake and Regulations/Nitrate and Edible Plants in the Mediterranean Region of Turkey: An Overview/Pathophysiology of Nitrate Toxicity in Humans and its Mitigation Measures/Nitrate Content in the Edible Parts of Vegetables: Origin, Safety, Toxicity Limits and the Prevalence of Cancer in Iran/Studying Nitrate Accumulation in Spinach and Cabbage Under Organic Conditions/Use of Organic Fertilizers for Crop Nutrition: Impact on Environmental and Threats to Human Health/Nitrate Management Approaches in Leafy Vegetables/Crop, Soil, and Nitrogen Fertilization Management Strategies to Reduce Nitrate Accumulation in Plants/Index.

Audience – Students of Botany, Agriculture & Biotechnology.

Objective Genetics, Biotechnology, Biochemistry and Forestry

New



Second Edition

V. K. Khanna

ISBN: 978-93-90620-66-1/Year 2023
Size: 18 cm × 24 cm/Pages 532
Paperback/₹ 565.00

The second edition of Objective Genetics, Biochemistry and Forestry is an up-to-date version in which many new questions have been added along with those on related topics, such as Natural Selection, Genetics and Evolution, General Genetics, Plant Breeding, Microscopy, Cell Division, Mendelism, DNA Biotechnology, Biochemistry, Forestry, and Tissue Culture, etc.

This book has been designed to assess the candidate's understanding of the subject. It is perhaps for the first time where questions have four to six choice statements, which are to be understood to find the right answer. One has to think and remember what he has learnt to be able to answer the questions.

In most of the competitive examinations such as Agriculture Research Services of Indian Council of Agricultural Research, NET, State Eligibility Test and Civil Services Examination, etc. Objective type questions are asked. Also, the entrance test for admission to many universities are totally objective.

Salient Features:

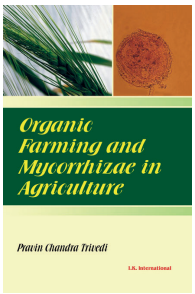
- Divided in 3 sections, the first section includes the multiple-choice questions based on 23 categories, followed by the answers to those questions (second section). The third section includes the appendices.
- Appendices include glossaries on genetics, tissue culture, biotechnology, biochemistry, and forestry. A brief note about Nobel Prize, list of Nobel Laureates, state Agricultural Universities in India, merits and awards given by ICAR, etc.
- Over 3200 questions have been given in the book.

Contents:

General/Natural Selection, Genetics and Evolution/General Genetics/ Microscopy/Cell and Cell Structure/Cell Division/Mendelism/ Sex Determination and Sex Linkage/Extranuclear Inheritance/ Quantitative Genetics/Cytology and Cytogenetics/Linkage and Recombination/Chromosomal Aberrations/Genetics of Bacteria and Bacteriophages/Gene Mutations/Genetic Material (DNA and RNA)/ Genetics of Development and Behaviour/Population Genetics/Tissue Culture/DNA Biotechnology/Genetics of Cancer and Immunology/ Biochemistry/Forestry

Audience: Candidates appearing for Agriculture Research Services of Indian Council of Agricultural Research, NET, State Eligibility Test and Civil Services Examination.

Organic Farming and Mycorrhizae in Agriculture



Pravin Chandra Trivedi

ISBN: 978-81-88237-63-0/Year 2007
Size 16 cm × 25 cm/Pages 300
Hardback/₹ 1295.00

Organic farming is a technique of producing crops, in which the use of synthetic and chemical inputs like fertilizers, pesticides, growth regulators and livestock feed additives is avoided. To reduce the harm caused by indiscriminate use of synthetic chemicals, organic materials such as farm manure, compost, vermicompost, biofertiliser, biopesticide and so on, can be used.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Over the years, need to go organic in agriculture is being increasingly felt for attaining sustainable production. The present book incorporates articles on different aspects of the subject in two sections. Section I deals with information on Organic Farming and Section II includes articles on Mycorrhizae. Both sections provide the most extensive and thematic coverage of the subject. It incorporates articles on organic farming, biofertilizers, PGPR bioinoculant, role of mycorrhiza in agriculture, biopesticides, VAM biotechnology and economics of bio-inputs usage in agriculture. It will be of interest to agricultural scientists, teachers and researchers in the field of agriculture.

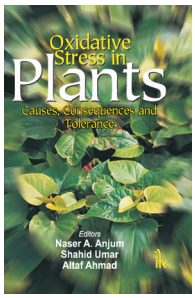
Contents:

Organic farming: Prospects and applications/Composting technology for organic farming/*Azolla* for sustainable crop production/ Potentiality of biofertilizer and organic farming in bast fibre crops/Role of organic farming in sustainable agriculture/ PGPR bioinoculant as input in organic farming/A study of economics of bio-inputs usage in agriculture in Tamil Nadu/ Strategy for the development of dry land agriculture/Mycorrhizal fungi: A boon for sustainable agriculture/ Biopesticides and their importance in sustainable agriculture/ Agricultural biodiversity and its potential use in India/Association of AM Fungi in some medicinal plants and its influence on growth/ Vesicular Arbuscular Mycorrhizae: A review/VAM biotechnology: Current trends and future prospects/Mass multiplication of *G. fasciculatum*/ Management of AM-fungi in peanut (*Arachis hypogoea*)/ Mycorrhizal Association in Pteridophytes/Impact of conventional agricultural practice and agrochemicals on AM in agricultural field.

Audience – Students and Research Scholars in Agricultural Science, Biotechnology and Microbiology.

Oxidative Stress in Plants

Causes, Consequences and Tolerence



Editors

Naser A. Anjum • Shahid Umar
Altaf Ahmad

ISBN: 978-93-81141-02-1/Year 2012
Size 18 cm × 24 cm/Pages 545
Hardback/₹ 2495.00

Oxidative stress is a central factor in a number of biotic and abiotic stress phenomena that occurs when there is a serious imbalance in any plant cell compartment between the production of reactive oxygen species (ROS) and antioxidant defense, leading to physiological and metabolic changes. The presence of high concentration of ROS in cells causes oxidative damage to photosynthetic functions and vital bio-molecules, and disrupt cellular metabolism. Thus, it is important for plant cells to have tight control on the concentration of ROS. Plants possess to a variable extent antioxidant metabolites, enzymes and non-enzymes that have the ability to detoxify ROS thus, to protect the photosynthetic- and cellular functions against ROS-caused oxidative stress and to maintain optimum growth, development and productivity under changing environment.

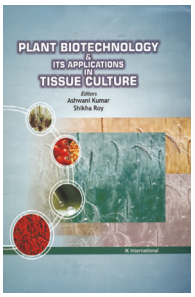
The current volume mainly elucidates major recent advances through physiological and molecular studies on the aspects of the causes, consequences of oxidative stress and also discusses and suggests potential strategies for enhancing tolerance to oxidative stress in detail in the light of the advances in molecular biology.

Contents:

An Introduction to Oxidative Stress in Plants and the Role of Non-Enzymatic Antioxidants/Environmental Factors Affecting Components of Ascorbate-Glutathione Pathway in Crop Plants/ Regulatory Role of Components of Ascorbate-Glutathione (AsA-GSH) Pathway in Plant Tolerance to Oxidative Stress/Ascorbate and Glutathione: Saviours Against Oxidative Stress/Ascorbate-Glutathione and Plant Tolerance to Various Abiotic Stresses/ Ascorbate-Glutathione Related Redox Regulation in Plant Stress Tolerance/Detoxification of Heavy Metal Induced Oxidative Stress in Plants – Enzymatic– and Non-Enzymatic Mechanisms—A Mini Review/Significance of Glutathione in Higher Plants for Combating Abiotic Stress-Effects/Heavy Metals and Oxidative Stress in Plants/ Ascorbate and Glutathione: A Defence System Against Heavy Metal Stress in Plants/Role of Ascorbate Peroxidase and Glutathione in Higher Plants to Abiotic-Induced Oxidative Stress/Defence Strategies of Plants Against UV-B-Induced Oxidative Stress/Role of Ascorbate-Glutathione During Salt Stress-Induced Oxidative Stress Tolerance in Plants/Secondary Metabolites as Non-Enzymatic Plant Protectors from Oxidative Stress/The Role of Ascorbate in Growth and Development of Cells During the Formation of Annual Rings in Coniferous Trees/Modulation of Glutathione, its Redox Couple and Related Enzymes in Plants Under Abiotic Stresses/Heavy Metals in Soil and Plants: An Overview of Arsenic, Cadmium, Chromium and Mercury/Index.

Audience – PG and Research Scholars in Agricultural Biotechnology & Plant Sciences.

Plant Biotechnology & its Applications in Tissue Culture



Editors

Ashwani Kumar • Shikha Roy

ISBN: 978-81-88237-50-0/Year 2006
Size 18.5 cm × 24 cm/Pages 326
Hardback/₹ 1995.00

In recent years, plant cells are being increasingly utilized as model systems to unravel the cellular and molecular mysteries of nature. The basic mechanisms of developmental biology, cellular and molecular interactions at the cell and tissue level, gene expression and regulation leading to genetic modifications and areas of genomics, are constant ares of research.

Salient Features:

- Embryogenesis, regeneration and micropropagation
- Genomics and genetic transformation systems
- Secondary metabolites, metabolic engineering and molecular biology
- Resistance to biotic and abiotic stress
- Tree biotechnology

The present book is an attempt to deal with all the topics in-depth and to find out the molecular aspects of different processes in cultured plant cells, so as to exploit them for the benefit of plant biotechnology.

Contents:

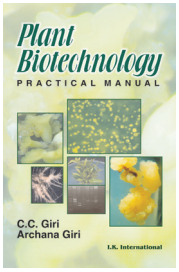
Some studies on Somatic Embryogenesis: A tool in plant biotechnology/Cellular differentiation and genetic transformation studies in Indian Legumes, Crucifers, Mulberry and Cereals/ *Agrobacterium* mediated transformation of chickpea (*Cicer arietinum L.*)/Constraints and relevant strategies in genetic transformation of sorghum/Selection of transgenic plants using positive selectable markers and other non-antibiotic marker genes/Production of hybrid plants in Thompson seedless grapes (*Vitis vinifera*) through breeding an in ovulo embryo rescue methods/Somatic embryogenesis in chickpea (*Cicer arietinum L.*)/Polyamines and long-term plant regeneration/ Somatic embryogenesis in chir pine (*Pinus roxburghii Sarg.*)/Molecular diversity of elite WA-CMS maintainer lines with EUI gene for hybrid breeding in rice/Characterization of candidate clumps of *dendrocalamus strictus* using RAPDs/Plantlet regeneration from the nodal segments of pomegranate (*Punica granatum L.*)/ Hardening of *Garcinia indica*/ Production of plumbagin a multifarious medicinal compound from cultured cells of *Plumbago rosea L.*/Secondary metabolites from tissue cultures of some arid zone plants/Steroidal sapogenin in moth bean cultivars *in vivo* and tissue culture/Production of bacoside

by multiple shoot cultures and in vitro regenerated plantlets of selected cultivar of *Bacopa monnieri* (L) Wettst/Biotechnology of medicinal plants/ Somaclonal variants for salt tolerance and *in vitro* propagation of peanuts/Flow cytometry: A comparatively new tool in plant biotechnology/Steroid factories: Prospects and practicalities in effective farming of *Solanaum* plants/Genetic transformation of grain legumes/In vitro Adventitive Embryony: A safe alternative to Citrus budwood importation/Micropropagation of *Gmelina arborea Roxb.* using mature tree tissues Optimization of *in vitro* responses/ Challenges in cashew tissue culture: An overview/Index.

Audience – Students and Research Scholars in Plant Biotechnology.

Plant Biotechnology

Practical Manual



C.C. Giri • Archana Giri

ISBN: 978-81-89866-14-3/Year 2006
Size 16 cm × 24 cm/Pages 160
Paperback/₹ 295.00

Plant Biotechnology: Practical Manual covers most of the important areas of present day plant biotechnology, beginning from plant tissue culture media preparation to transgenic plant production and molecular markers. It is meant for both students who are being introduced to plant biotechnology and those wanting to do advance research in this field. It would also be helpful for teachers in formulating their own practical protocols using different model plant systems.

This book includes the principles, theoretical background and the basis for each protocol supported by the authors' own research findings. This approach may help the learners and researchers to modify their procedures to develop their own protocols and methods utilising the proven protocols included in the book.

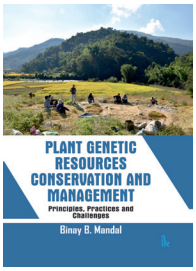
Contents:

Plant Tissue Culture Basics and Know-How/Plant Regeneration via Organogenesis and Somatic Embryogenesis/Protoplast Isolation, Culture and Somatic Hybridization/Anther Culture and Production of Haploids/Encapsulation Techniques for Synthetic Seeds (Synseeds)/ Technique for Embryo Rescue of Wide Cross Hybrids/Cell Suspension Culture and Production of Secondary Metabolites/Induction of Transformed Hairy Roots using Wild Strains of *Agrobacteium rhizogenes* and Production of Secondary Metabolites/Induction of Transformed Shooty Teratomas using Specialized Strains of *Agrobacteium tumefaciens* and Production of Secondary Metabolites/*Agrobacterium* Mediated Genetic Transformation/Anatomical and Histological Techniques for Plant Tissue Cultured *in vitro*/Chromosomal Analysis of *in vitro* Cultured Tissue and Regenerated Plants/Techniques for Developing Molecular Markers – Basics/Prescribed Safety Practices in the Laboratory.

Audience – B.Sc./M.Sc. in Biotechnology, Genetics, Botany, Agriculture, B.Tech./M.Tech. in Biotechnology.

Plant Genetic Resources Conservation and Management

Principles, Practices and Challenges



Binay B. Mandal

ISBN: 978-93-90620-21-0/Year 2022
Size: 18 cm × 24 cm/Pages 344
Hardback/₹ 3450.00

Plant Genetic Resources Conservation and Management provides, in-depth description of principles and practices of the techniques of both ex situ conservation strategy (seed and field genebanks, in vitro, DNA and pollen storage), and in situ conservation strategy (on-farm and nature reserves) for plant genetic resources (PGR), and current status of their applications. The book covers all aspects of plant germplasm conservation and management including plant domestication and crop evolution, history of conservation, exploration, exchange, quarantine, conservation techniques, characterization and evaluation, information management, intellectual property rights and conservation under climate change. In the area of management of plant germplasm, the book has focused on topics such as sampling techniques during collecting, strategies for enhancing exchange, biosafety and regulation of genetically modified (GM) crops, role of evaluation, core collection and pre-breeding in germplasm utilization. Additionally, it focuses on intellectual property rights (IPRs) and various international treaties on plant germplasm which have made access to genetic resources, a debated topic. It also includes the challenges of conservation in the event of climate change and their potential solutions. The content of the book provides comprehensive knowledge about plant germplasm conservation and management to help understand the basic principles, practices and future challenges involved. With its coverage and specific focused topics, it will be useful to researchers, conservationists, teachers, as well as students who are involved or interested in PGR conservation and management..

Salient Features:

- Provides methodologies, status and challenges of application of the techniques of ex-situ conservation (seed, field, in vitro & DNA genebanks) and of in-situ conservation (on-farm & nature reserves) of plant genetic resources.
- Focuses on topics of germplasm management like sampling during collecting, enhancing exchange, genetically modified crops in quarantine, core collection in management, evaluation and utilization.
- Deals with intellectual property rights, access to plant genetic resources, and challenges and potential strategies for germplasm conservation under climate change.

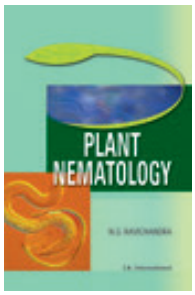
Contents:

Introduction to Plant Genetic Resources and Their Conservation/ History of Plant Genetic Resources Conservation/Plant Domestication and Crop Evolution/Plant Germplasm Exploration and Collecting/ Introduction and Exchange of Plant Genetic Resources/Plant

Quarantine and Related Regulatory Processes/Ex Situ Conservation: Seed Genebanks/Ex Situ Conservation: Field Genebanks, Botanical Gardens and Arboreta/Ex Situ Conservation: In Vitro, DNA and Pollen Conservation/In Situ Conservation: On-farm and Home Gardens/In Situ Conservation: Nature Reserves/Characterization, Evaluation and Utilization of Germplasm/Genetic Resources Information Management/Intellectual Property Rights and Access to Plant Genetic Resources/Climate Change and the Conservation of Plant Genetic Resources/Appendix 1/Appendix 2. A List of Basic Equipment for Germplasm Collecting/References/Index

Audience – UG, PG students of Agricultural Science.

Plant Nematology



N.G. Ravichandra

ISBN: 978-81-89866-61-7/Year 2008
Size 16 cm × 24 cm/Pages 718
Paperback/₹ 595.00

This book covers all the fundamental and applied aspects of 'Plant Parasitic Nematodes'. It also throws light on the latest developments in the physiological and molecular aspects of plant nematology. The content has been developed keeping in mind both the student community and the research scholars, as nematology has been a constant area of interest and research for the past few decades.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

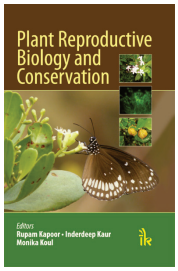
+91-011-43205400
info@ikinternational.com

Contents:

Introduction/History and development of nemotology/Economic importance of plant parasitic nematodes/Crop losses/Important genera of plant parasitic nematodes/General characteristics/ Morphology and anatomy/Nematological techniques/Taxonomy/ Biology and ecology/Types of parasitism/Symptoms of nematode injury/Interaction of nematode with micro-organisms/Nematode diseases of crop plants/Physiological and molecular nematology / Entomopathogenic nematodes/Nematode management.

Audience – Students and Researchers in Botany and related areas.

Plant Reproductive Biology and Conservation



Editors

Rupam Kapoor• Inderdeep Kaur
Monika Koul

ISBN: 978-93-82332-90-9/Year 2015
Size 18 cm × 24 cm/Pages 496
Hardback/₹ 3225.00

Reproductive biology of plants is an emerging frontier area in plant sciences. Recent advances and research in this field are laying foundations for major conservation programmes initiated for protection of plant species all over the world. Reproductive mechanisms that operate in plants account for the diversity and evolution of many important families.

The present volume is a compilation of eighteen chapters written by eminent scientists who work on various aspects of plant reproduction, conservation of species, and molecular characterization of reproductive traits. It gives updated literature on the topics of academic and research interest. Also, the endeavour is to incite inquisitive youngsters to pursue research in this field. The book is well illustrated and makes an interesting reference material for undergraduate as well as postgraduate students.

Contents:

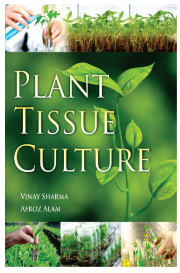
Reproductive biology: an important discipline of plant sciences/A molecular genetic approach elucidates complex plant reproductive processes/Recruitment limitation: a major driver for species vulnerability/Phenological implications for the conservation of forest trees/Techniques involved in reproductive biology: newer insights and future perspectives/Sterility in plants/Apomixis in angiosperms/Love in the air: wind pollination – ecological and evolutionary considerations/Emerging trends in endosperm biology/Reproductive biology in relation to conservation: case history of artemisia maritimal/An appraisal on in vitro conservation and biotechnological interventions in spilanthes acmella murr/ Genetic control of mitosis and meiosis in angiosperms/Role of reproductive biology in conservation of plants/Serpentinophytes: resource survey and conservation for potential applications in biotechnology/Pollination ecology of cullenia exarillata A. Robyns, a key food plant in the tropical evergreen forest ecosystem of the western ghats/Reproductive success of angiosperms in response to climate: an assessment/Arbuscular mycorrhizal fungi: potential role in conservation of endangered plants/Genetic Diversity in Various Seed Spices and Medicinal Plants Using Different Molecular Markers/ Index.

Audience – Undergraduate and Postgraduate students of Botany, Biotechnology & Biology.

Plant Tissue Culture

Vinay Sharma • Afroz Alam

ISBN: 978-93-84588-44-1/Year 2015
Size 18 cm × 24 cm/Pages 404
Paperback/₹ 545.00



TThe present book is an endeavour to make comprehensive, authentic and standard study material related to Plant Tissue Culture, accessible to the readers. This book has been assembled to accomplish the needs of undergraduate and post-graduate students of Plant Tissue Culture. Aspirants for the Civil Services and other competitive examinations too will surely gain advantage by this book.

The book is divided into twenty chapters which deal with Basic Equipment and Facilities for Plant Tissue Culture, Media Composition, Tissue Culture Techniques, Plant Cell Culture, Protoplast Isolation and Culture, Somatic Hybridization, Somatic Embryogenesis, Synthetic Seed, Micropropagation, Haploid and Triploid Production, Embryo Culture, etc. Many recent techniques are also provided such as Germplasm Storage, Genetic Transformation, Genetically Modified (GM) Plants with their Risks and Benefits, Metabolic Engineering, Useful Genes in Plant Genetic Engineering, Terminator Technology and Molecular Markers and their applications.

The primary aim of this book is to provide all relevant information covering both conventional and modern aspects of Plant Tissue Culture at one place.

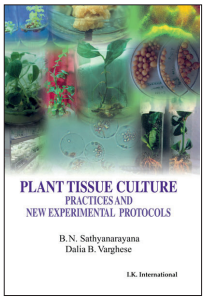
Contents:

Introduction/Basic Equipment and Facilities for Plant Tissue Culture/Media Composition/Tissue Culture Techniques/Plant Cell Culture/Protoplast Isolation and Culture/Somatic Hybridization/ Somatic Embryogenesis/Synthetic Seed/Micropropagation/ Haploid Production/Triploid Production/Embryo Culture/ Germplasm Storage/Genetic Transformation/Genetically Modified (GM) Plants: Its Risks and Benefits/Metabolic Engineering/Plant Genetic Engineering—Genes of Interest/Molecular Markers and Their Applications in Plant Species/Plant Tissue Culture & Scope for Entrepreneurs/Glossary/Suggested Readings/Index

Audience – Students of Botany and Biotechnology.

Plant Tissue Culture

Practices and New Experimental Protocols



B.N. Sathyanarayana
Dalia B. Varghese

ISBN: 978-81-89866-11-2/Year 2007
Size 16 cm × 24 cm/Pages 318
Hardback/₹ 1595.00

Plant Tissue Culture forms an integral basis of the present day biotechnology. *Plant Tissue Culture: Practices and New Experimental Protocols* is being brought out to fill the existing gap in the available literature on plant tissue culture, especially focusing on the aspects of practical procedures and protocols of tissue culture. This book contains important experimental techniques it has been designed in a simple way, giving all the necessary procedures as a general guideline and also necessary tips to manoeuvre any problem encountered. These tips are based on the first hand experiences of the author while teaching and researching the techniques of plant tissue culture. A unique feature of this book is the inclusion of several techniques describing the actual protocols experimented and developed with different plant species by different scientists.

Contents:

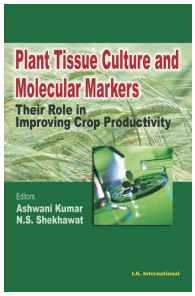
Historical Developments in Plant Tissue and Cell Culture/ Laboratory Design and Development/Instrumentation/Plant Tissue Culture Media/Sterilization Techniques/Safety Rules and Regulations/Applications of Plant Tissue Culture/ Micro-propagation/Micropropagation by Proliferation of Auxiliary Buds/Micropropagation by Adventitious Shoot Regeneration/ Plant Regeneration from Callus Cultures/Plant Regeneration by Somatic Embryogenesis/Meristem Culture/*In vitro* Haploid Production/Embryo Culture/Endosperm Culture/Culturing of Roots *in vitro*/Protoplast Isolation and Culture/Protoplast Fusion and Cybridization/Storage Organ Culture/*In vitro* Germplasm Conservation/*In vitro* Production of Plant Secondary Metabolites/

Acclimatization of Micropropagated Plantlets/*In vitro* and *ex vitro* Rooting of Micro Shoots/Somaclonal and Gametoclonal Variations/ Agrobacterium Mediated Transformation/ Problems in Plant Tissue Culture/Commercial Micropropagation/Microscopic and Photographic Techniques for Plant Tissue Culture/Histological Techniques/Glossary/Appendix/Bibliography.

Audience – Plant Biotechnology.

Plant Tissue Culture and Molecular Markers

Their Role in Improving Crop Productivity



Editors

Ashwani Kumar • N.S. Shekhawat

ISBN: 978-81-89866-10-5/Year 2009
Size 18 cm × 25 cm/Pages 714
Hardback/₹ 2495.00

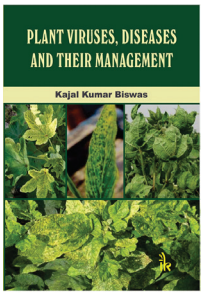
The present book discusses micropropagation studies on several crop plants, molecular basis of understanding various life processes including molecular basis of somatic embryogenesis and other physiological and biochemical processes having significant biotechnology application. It vitro studies of some important plants like *Aloe vera*, *Simmondsia chinensis, Anacyclus pyrethrum and Crataeva nurvala, Arachis hypogaea* L., *Phoenix dactylifera, Dendrocalamus asper, Asparagus adescendents* Roxb., natural products of plants origin with their therapeutic potential and biotechnological production, genome analysis of crop plants with future applications in biotechnology etc. It is useful for postgraduates and researchers in plant biotechnology and related areas like plant science, biotechnology, bioscience, environmental science, food biosciences and chemistry. It will also be of interest for professionals working in the plant biotechnology industry.

Contents:

Contamination Control and Enhanced Axillary Budding from Mature Explants of *Taxus baccata* ssp. *Wallichiana*/Bioinformatics: an Overview/Intellectual Property Rights in Biotechnology/*In Vivo* and *In Vitro* Studies on Plant Tumors/Integrated Approaches of Mutagenesis and *In Vitro* Selection for.../Clonal Fidelity in Micropropagated Plants/Tissue Culture of Date Palm (*Phoenix Dactylifera* L.)—A Non-conventional Approach/ Cytological Analysis of Nodal Stem Segment and Callus Regenerated Plantlets of *Azadirachta indica*.../ Establishment of an *in vitro* Clonal Propagation Method for Commercial Exploitation from A High Biomass Yielding *Aloe Vera* (L.) Germplasm/Unravelling the Molecular Basis of Somatic Embryogenesis/Doubled Haploids in Crop *Brassicas*: Retrospect and Prospects/A Review of Tissue Culture Studies on Bamboos/ Cloning of Female Plant of *Simmondsia Chinensis* (Link) Schneider Selected for Cultivation in Rajasthan/Comparative Studies on Somatic Embryogenesis and Plant Regeneration from Immature and Mature Zygotic Embryo Axes of Groundnut/*In Vitro* Studies and Micropropagation of *Anacyclus pyrethrum* and *Crataeva nurvala*/Micropropagation and Large-Scale Plant Regeneration of Edible Bamboo *Dendrocalamus asper* through Somatic Embryogenesis/ Natural Products of Plant Origin with Therapeutic Potentiality and their Biotechnological Production/ Micropropagation of Medicinal Plants of Indian Desert and Aravallies/Morphological and Biochemical Changes in *in vitro* Raised *Arachis Hypogaea* Var RG-141.../ Morphogenesis in Cultured Tissues of Three Grass Species/*In Vitro* Propagation of *Vigna sp*/Biology and Biotechnology of Groundnut (*Arachis hypogaea* L.) — A Review/Propagation of *Chlorophytum Borivilianum* San. and Fern.—A Review/Recent Advances in Micropropagation of *Chlorophytum Borivilianum* Sant. & Fern./ Enhancement of Secondary Metabolites by Elicitation and Metabolic Engineering/High Frequency Plant Regeneration for *Saccharum Munja* — A Useful Plant of Arid Area/Biology and Biotechnology of *Lasiurus Sindicus* (Shewan): A Valuable Grass of Thar Desert/Liquid Culture System Stimulates *In Vitro* Growth and Shoot Multiplication in Some Medicinally Important Plant Species in Rajasthan/*In Vitro* Approaches for Plant Regeneration and Conservation of Some Potential Medicinal Plants/Rejuvenation of Mature Plant Tissues/ Molecular Characterization of Diversity in *Feronia limonia* Using ISSR Markers/Molecular and Morphometric Diversity in Relation to Breeding System in *Andrographis Paniculata* (Burm. f.) Nees/An Approach to Determine Polymorphic and Sharing of Genome Between Crops of Poaceae Family Using RAPD as Genetic Tool /Molecular Biology of Fruit Ripening/Molecular Markers — an Important and Indispensable Biotechnological Tool for Crop Improvement and Conservation/Morphological and Molecular Characterization of a Rare Medicinal Herb 'Safed Musli' (*Chlorophytum Borivilianum* Sant. Et Fernand.)/Biochemical Changes Associated with Morphogenesis in Saffron/Insecticidal Genes and their Sustainable Use in Insect Resistant Transgenic Crops/Gene Tagging : A Golden Research Area in Agriculture Biotechnology/Alternative Respiration may Have a Role in Reducing Oxidative Stress in Plants/Tissue Culture Techniques in Introgression of Resistance to *Alternaria helianthi* from Wild Sunflowers to Cultivated Sunflower (*Helianthus annuus* L.)/Virus Resistance Inducing Proteins From Plants/Effect of NaCl and Thermal Stress on Proline Content and Electrophoretic Behaviour of Protein in Small-Millets Seedlings Grown *In Vitro*/A Study of Systemic Acquired Responses to Pathogen Attack in Certain Economically Important Crops/Efficient Microdosing of Phosphorus to Pearl millet Hybrids (*Pennisetum americanum* L.) for Improved Seedling Establishment under Nutrient-Stressed Environments/Index.

Audience – PG and Research students, Scientists, Engineers: Biological, Plant, Microbiology, Bioengineering and Biotechnology.

Plant Viruses, Diseases and Their Management



Kajal Kumar Biswas

ISBN: 978-93-84588-81-6/Year 2017
Size 18 cm × 24 cm/Pages 658
Paperback/₹ 1395.00

Plant Viruses, Diseases and Their Management consists of 19 chapters covering all the aspects of plant viruses, diseases and their management containing information of classical as well as advanced plant virology. This textbook gives information on new advances which are taking place in the fast-evolving field of Plant Virology. It contains separate chapters on properties of plant viruses with symptoms, composition, morphology, nomenclature and modern classification, along with description of different viruses. Chapters based on identification, isolation and purification of plant virus, and protein- and nucleic acid-based modern diagnostic techniques have also been included in this book. This book also contains information on ecology, epidemiology and general management strategies of plant virus related diseases. Genome organization, genome strategy and gene function, virus replication and virus movement have also been dealt extensively and illustrated with diagrams in an organized way in different chapters. Transmission of plant viruses by various means and virus-vector molecular interaction have been covered elaborately. This book includes a large chapter covering almost all the important plant virus diseases in India and their management. The last chapter contains practical manual covering protocols of advanced techniques which will help the researchers and plant virologists.

With its focus and coverage, this will serve as a textbook for undergraduate, postgraduate students and research scholars in Plant Virology, Agriculture, Botany, Plant Pathology, Entomology, Microbiology, Molecular Biology and Biotechnology. This book will help teachers to prepare for lectures.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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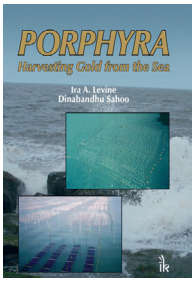
Contents:

History and milestone in plant virology/ Symptomatology and physiological changes/ Virus components and morphology/ Genome structure and organization/ Morphology of virus/ Sub-viral agents/ Virus classification/ Transmission of plant virus: Mechanical, vegetative, dodder and seed transmission/ Transmission of plant virus: Vector transmission/ Virus description/ Expression and function of virus gene/ Replication of pant viruses/ Virus movement and distribution in the plant/ Plant virus variation and evolution/ Identification, isolation, purification, detection of virus/ Plant virus ecology and epidemiology/ Virus diseases in plant/ General management strategies of virus diseases/ Advanced techniques in Plant virology

Audience – UG and PG students of Plant Virology, Agriculture, Botany, Plant Pathology, Entomology, Microbiology, Molecular Biology and Biotechnology.

Porphyra

Harvesting Gold from the Sea



Ira A Levine
Dinabandhu Sahoo

ISBN: 978-93-80026-94-7/Year 2010
Size 21.5 cm × 28 cm/Pages 104
Hardback/₹ 995.00

The intent of this book is to offer a primer to any individual, family, village co-operative, NGO, state, federal funding agency, or corporation that wishes to introduce Porphyra (known as Nori in Japan) farming as a socio-economic development driving force. This effort is not intended to be a textbook on Porphyra biology but a reference tool for nori cultivation from the conchocelis culture system through blade harvest and primary processing. Our hope is to provide aquaculture extension agents a teaching guide for nori cultivation. This guide will provide step-by-step instruction for the assembly of a nori production system, care, maintenance, harvesting, and product preservation.

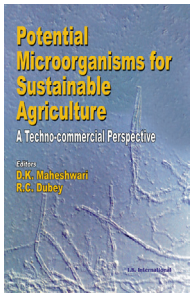
Contents:

Introduction/Value and Quality/Uses of Porphyra/Biology/ Farming/Conclusion/Literature Cited/Glossary of Terms/Index.

Audience – Teachers, Researchers and students of Aquaculture.

Potential Microorganisms for Sustainable Agriculture

A Techno-commercial Perspective



Editors

D.K. Maheshwari • R.C. Dubey

ISBN: 978-81-907462-0-5/Year 2008
Size 18 cm × 24 cm/Pages 500
Hardback/₹ 2445.00

The number of potential microbes exploited commercially is scanty irrespective of their high number present in the diverse habitats. In recent years, they have shown successfulness in multifarious areas such as production of industrially viable products, organic chemicals, pharmaceuticals, recovery of metals, improvement and maintenance of environmental quality, and insect and pest control.

The Twenty-three articles included here fall under three broad categories, namely, agricultural microbiology, industrial microbiology and bioremediation.

The psychrophiles hold many biological secrets such as biochemical limits to macromolecular stability and the blueprints for constructing the stable macromolecules. Lactic acid bacteria are known for their role in the preparation of fermented dairy products. Potential strains for production of lactic acid with emphasis on its fermentation, economics and systematics have been dealt with in greater detail.

Biotechnological applications of pectinases in general and alkaline pectinases in particular play an important role in industry. Production, characteristics and applications of microbial alkaline pectinolytic enzymes have been elaborated. Production of ergot alkaloids thrives a novel knowledge. Now-a-days, semi-synthetic ergot alkaloids are widely used as a potential therapeutic agent. Microbial production of glucans, functional organization and their industrial significance have been systematically reviewed. Bioactive exopolysaccharides from mushrooms have gained importance in recent years. Production and characterization of exopolysaccharides and conversion of unsaturated fatty acids into value-added hydroxyl fatty acids by using microorganisms are used in a wide range of industrial products. Enhancing the microbial production of 1,3-propanidial and its application highlights the commercial exploitation of potential microorganisms. Aldehyde and organic acid production by using oxydases and their derivatives advantageous role in industry. Some chapters are devoted to the potential entomopathogenic fungi for management of insect pests, biotechnological applications of fusaria, microbial metabolite-mediated biocontrol of soil-borne plant pathogens, bioremediation of heavy metals, organochlorine and organophosphate pesticides. Bioinoculants apart from being eco-friendly are being used, but reviewers have emphasized the constraints in commercial bioinoculant production and their quality assurance.

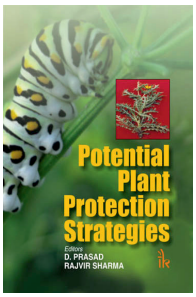
All the articles of this volume depict the role of microorganisms in agricultural industries. The exploitation of such beneficial microorganisms may improve agricultural systems with economically sound production of human food and animal feed. This volume will certainly help the PG and research students of agricultural microbiology and biotechnology.

Contents:

Coinoculation of PGPR for Plant Growth Promotion and Disease Control/PGPR-Biotechnology for Management of Abiotic and Biotic Stresses in Crop Plants/Nature and Applications of *Bacillus* Species for Improving Plant Growth/Biofertilizers for Sustainability, Agroresources and Technology/Biodiversity of Plant Pathogenic *Fusarium* Species/Biocontrol of Soil-Borne Phytopathogens by Fluorescent Pseudomonads as a Sustainable Alternative to Agrochemicals/Biological Control: Alternative Paradigms for Commercialization/Screening, Evaluation and Formulation of Delivery Systems for Biocontrol Agents/Molecular Basis of Plant Growth Promotion and Biocontrol Activities of Rhizobacteria/ Rhizospheric Competent Microorganisms in Biological Control of Plant-Parasitic Nematodes/Recent Advances in Biotechnology of *Beauveria Bassiana* : A Mycopesticide Against Insect Pests/ Endophytic Fungi and Their Role in Biological Control and Plant Growth Promotion/Microorganism-Mediated Management of Plant Pathogens/Retrospects and Prospects of Tomato Leaf Curl Virus Research in India/Biotechnological Application of Mircoorganisms in the Management of Viral Diseases of Crops/*Trichoderma* : Biology and Biotechnology/*Trichoderma* : A Potential Biocontrol Agent for Biopesticide Industries/Potential of *Trichoderma* for Biocontrol and its Mass Production/Rhizomediation in Soil for Sustainable Agriculture/Strategy to Improve Ruminant Productivity Through Direct-Fed Microbials/Tripartite Symbiotic Association: Legume-Rhizobia-Mycorrhiza/*Agrobacterium* as Natural Tool for Plant Genetic Engineering/Coastal and Dune Vegetation and Microbial Resources : Benefits, Threats and Safeguards/Index.

Audience – PG and research scholars in Microbiology & Agricultural Science.

Potential Plant Protection Strategies



Editors

D. Prasad • Rajvir Sharma

ISBN: 978-93-80578-29-3/Year 2011
Size 18 cm × 24 cm/Pages 564
Hardback/₹ 3445.00

The present book is an attempt to analyse the problems and purpose, suitable measures for the effective management of the insect pests, plant diseases and plant parasitic nematodes. An effort has been done to compile possible database information in this book which contains 40 exhaustive and thought-provoking chapters by specialists in plant protection.

Fifteen chapters deal with entomological problems as a whole covering chemosterility, transgenic technology, insect pests of mung and urdbean, IPM, modified atmosphere for control of insects in storage, eco-friendly management of potato pests, use of biotechnology tools in pest management and tissue culture and transgenic crops in pest management.

Eighteen chapters deal with plant diseases like wilt of chickpea, citrus canker and bacterial diseases of fruit crops. Biocontrol of chickpea with soil pathogens, antifungal activity of essential oils, management of rice diseases through induced resistance crop loss by viral diseases, viral diseases of orchids, Trichoderma spp. for diseases management pathotype, management of red rot in sugar cane, biocontrol agent and mechanisms of action. There are four articles on nematology that highlight eco-friendly manage-ment of nematode in vegetables, nematopha-gous fungi of plant plastic nematodes, biocontrol agents and bacterial antagonists of plant parasitic nematodes.

A few chapters are of common interest such as paradigm shift in lac application, seed production in sugar cane, genetic engineering approaches for detoxification and decontamination of pesticides and attraction behaviour of Discolaimus major to prey nematodes. Besides these, three chapters are on importance of weeds, integrated weed management and role of composting in organic farming.

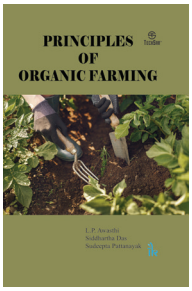
This book is very useful and informative for the scientists, teachers, students, scholars, administrators and policy-makers dealing with pest and disease management strategies in particular and plant protection in general.

Contents:

Fusarium Wilt of Chickpea and its Management/Paradigm Shift in Applications of Lac/Citrus Canker Research: Global Scenario/ Significance of Transgenic Crops in Pest Management / Chemosterility: Approach for Insect Pest Management/Transgenic Technology: A Modern Weapon in Pest Management/Bacterial Diseases of Fruit Crops and their Management/Insect Pest of Mungbean and Urdbean and their Integrated Management: A Review/Integrated Management of Soybean Insect Pests for Sustainable Agriculture/Modified Atmosphere: An Alternative to Control Insects in Storage/Current Modified three-tier Seed Production of Sugar cane/Eco-friendly Management of Potato Pest/Forgotten Pollinator: Protecting the Bees from Pesticide Poisoning/Prospects of Bio Control Agents against Chickpea Wilt/Antifungal activity of Essential Oils of Ocimum sanctum on Rhizoctonia solani and Fusarium oxysporium/Application of Biocontrol Agents for Management of Soil-borne Pathogens/ Insect Pests of Stored Products and its Control with Plant Products/ Eco-friendly Management of Plant Parasitic Nematodes in Vegetable Crops/Use of Biotechnological Tools in Integrated Pest Management/ Management of Rice Diseases through Induced Resistance/Present Situation of Crop Losses Caused by Plant Virus/Present Scenario of Management Strategies of Plant Viral Diseases/Nematophagous Fungi in Biocontrol of Plant Parasitic Nematodes/Curry Leaf (Murraya koenigii): Chemistry and its Role in Plant Protection/Nicotine to Neonicotinoid: the Most Successful Agrochemicals/Genetic Engineering Approaches for Detoxification and Decontamination of Pesticides/Nematodes as Bioinsecticides Against Vegetables Pests/ Pest Management by Tissue Culture/Integrated Pest Management in India: Progress, Problems and Prospects/Virus Diseases of Orchids: Diagnosis and Management/Trichoderma as Biocontrol Agent for Disease Management/Attraction Behaviour of Discolaimus major to Prey Nematodes and Tactors Influencing Attraction/Standardization of Pathotype Numbers of Colletotrichum falcatum on Sugar cane/ Strategies to Combat Challenges for Management of Red Rot in Sugar cane/Use of Biocontrol Agents and their Mechanisms of Action/ Bacterial antagonists in biocontrol of plant parasitic nematodes/ Weed—An Important Pest/Integrated Weed Management in Major Field Crops/Role of Composting in Organic Farming and Plant Protection/Applications of Nanoscience and Nanotechnology : A Revolution in Agriculture/Index

Audience – Scientists, teachers, students, scholars, administrators and policy-makers dealing with pest and disease management.

Principles of Organic Farming



New

Dr. L.P. Awasthi
Dr. Siddhartha Das
SudeeptaPattanayak

ISBN: 978-93-90620-10-4/Year 2023
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 425.00

Principles of Organic Farming comprises several valuable chapters like organic versus inorganic agriculture, organic farmingorganic nutrient resources and their fortification, growth promoting microorganisms, vermicomposting, quality analysis, grading, packaging, biofertilizers, national programme on organic products, certification processes, zero budget natural farming and manymore important topics.

Sustainable agriculture is implemented only when converting our chemical based agricultural system into organic based farming system. The book is framed on organic farming courses of various agricultural universities. It deals with the landmarks in the field of sustainable agriculture and organic farming.

Greenmanuring, soil improvement and amendments, biofertilizers, weed management, bio-pesticides, certification process etc. At the end of each chapter, there is an important question series designed to provoke individual thought and critical examination of their memory to increase the conceptual and analytical view of a particular chapters.

Contents:

Concept and Relevance of Organic Farming/Initiatives Taken by Government (Central/State), NGOs and Other Organizations for Promotion of Organic Agriculture/Organic Ecosystems and Their Concepts/Organic Nutrient Resources and Their Fortification/ Restrictions to Nutrient Use in Organic Farming/Organic Production Requirements/Choice of Crops and Varieties in Organic Farming/ Biological Intensive Nutrient Management: Organic Manures, Vermicomposting, Green Manuring, Recycling of Organic Residues/ Soil Improvement and Amendments/Biofertilizers.Integrated Diseases and Pest Management: Use of Biocontrol Agents, Biopesticides, Pheromones, Trap Crops, Bird Perches/Weed Management/ Operational Structure of NPOP/Quality Considerations, Processing, Labelling, Economic Considerations, Viability and Accreditation Processors/Certification Process and Standards of Organic Farming/ Marketing and Export Potential of Organic/Visit of Organic Farms to Study the Various Components and Their Utilization/Preparation of Enrich Compost, Vermicompost, Bio-fertilizers / Bio-inoculants and Their Quality Analysis/Indigenous Technology Knowledge (ITK) for Nutrient, Insect, Pest Disease and Weed Management/ Raising of Vegetable Crops Organically Through Nutrient, Diseases and Pest Management/Macro Quality Analysis, Grading, Packaging,

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and Post-harvest Management/Cost of Organic Production System/ Role of Nutrients in the Management of Crop Diseases Through Biopesticides/Zero Budget Natural Farming: Where Healthy Soil Makes Healthy Crop—An Eco-friendly Approach to Manage Insect Pests and Diseases/ Agro-Nanotechnology: An Eco-friendly Approach in the Management of Plant Disease and Mycotoxins/ Management of Fungal Diseases of Crops Through Plant-Based Natural Products/Scope of Botanical Pesticides in Storage Insect Pests Management/Microbial Control of Storage Insect Pests/Index

Audience: Undergraduate and Postgraduate students of agriculture stream.

Recent Mycological Researches



Editor

S.C. Sati

ISBN: 978-81-88237-80-7/Year 2007
Size 18 cm × 24 cm/Pages 352
Hardback/₹ 1295.00

Microbes, including fungi, constitute an important component of biodiversity. They comprise one of the biggest kingdoms in the living world. A lot of work has been done in mycology in the past several years in India and abroad.

The present book highlights latest researches in the field of mycology carried out by mycologists from the Indian subcontinent. It comprises a collection of 26 original research articles by eminent mycologists. These articles have been categorized under the following four major sections:

Fungal Flora/Diversity/Fungal Diseases/Management/Fungal Physiology/Ecology/Pollution/Fungal Biotechnology and Symbiosis

This book would be very useful for researchers, teachers and students studying mycology.

Sectional Contents:

Section A: Fungal Flora/Diversity

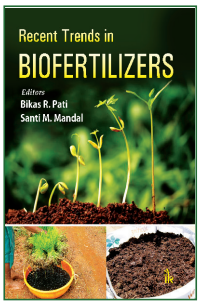
Section B: Fungal Diseases/Management

Section C: Fungal Physiology/Ecology/Pollution

Section D: Fungal Biotechnology and Symbiosis.

Audience – Postgraduate and research students of Plant Sciences.

Recent Trends in Biofertilizers



Bikas R. Pati • Santi M. Mandal

ISBN: 978-93-84588-65-6/Year 2016
Size 18 cm × 24 cm/Pages 280
Hardback/₹ 2195.00

Recent Trends in Biofertilizers comprises sixteen articles contributed by over forty distinguished academicians from India, Brazil and Egypt. These articles jointly address the broader need of increasing soil fertility through sustainable methods and practices.

Biofertilizers contain a wide range of naturally chelated plant nutrients, carbohydrates, amino acids, trace elements and plant growth promoting vitamins and hormones. These components are discussed appropriately in the book. Fresh insights into biofertilizer technology, biotechnology-based biofertilizers, and other recent developments in this area are covered in depth. Discussion of the tremendous advancements made in the last decade in biofertilizer technology through development of biotic and abiotic stress tolerant microbial strains is one of the hallmark features of this book. The book also appropriately addresses the soil aspects -- nutrient index values for different types of soil have been presented. Other major highlights of the book are coverage of liquid biofertilizers; benefits of different biofertilizer efficient strains along with the constraints in the production, distribution, field and marketing; quality control and assurance aspects; and application of bioinformatics.

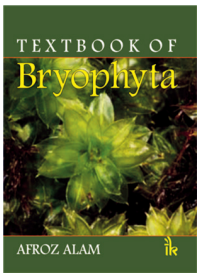
With its coverage and emphasis, this book will be an immensely useful reference for teachers and students of undergraduate colleges, universities, and research scholars who are engaged in this aspect of research, such as agricultural microbiology, trainees in biofertilizer industry and agricultural development officers.

Contents:

Quality Control of Biofertilizers: Current Scenario and Trends/Status of the Biofertilization Technology and Biosafety of Biofertilizers in Egypt/ Environment Friendly Phosphorus Biofertilizer as an Alternative to Chemical Fertilizers/Liquid Biofertilizers: Potentials and Prospects/ Understanding the Molecular Genetics of Microbial Phosphate Solubilization/Phosphorus and Potassium Rock Biofertilizers with Acidithiobacillus and Organic Matter in Tropical Crops/Potential use of Rhizobacteria as Biofertiliser and its Role in Increasing Tolerance to Drought Stress/Biofertilizer: An Alternative Fertilizer and Constraints in Its Technology/Application of Bioinformatics in Biofertilizer Technology/nifH Database: Insights into Diversity and Evolution to Explore Next Generation Nitrogen Fixer/Arbuscular Mycorrhizal Dependency of Plants/Vermicomposting to Modified Vermicomposting: Technological up Gradation For Improving Quality and Nutrient Status/Biofertilizer for Bioremediation/Plant Growth Promoting Rhizobacteria and Their Potential Approach to Bioremediation of Toxic Metal/Potential Characteristic Features of Bio-Fertilizers/Integration of Ecofriendly Biotechnological Tools For Sustainable Environmental vis-a-vis Bioresource Management/Index

Audience – Students, teachers and researchers in Agriculture and its allied areas; policy makers and fertilizer industry professionals.

Textbook of Bryophyta



Afroz Alam

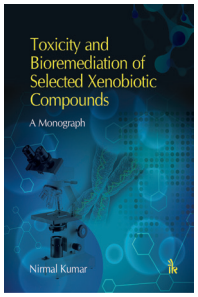
ISBN: 978-93-82332-54-1/Year 2015
Size 18 cm × 24 cm/Pages 452
Paperback/₹ 545.00

(See on page 217)

Toxicity and Bioremediation of Selected Xenobiotic Compounds

A Monograph

New

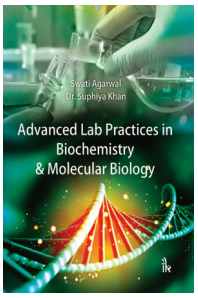


Nirmal Kumar

ISBN: 978-93-86768-60-5/Year 2018
Size 16 cm × 24 cm/Pages 348
Hardback/₹ 1995.00

(See on page 198)

Advanced Lab Practices in Biochemistry & Molecular Biology



Swati Agarwal • Suphiya Khan

ISBN: 978-93-85909-96-2/Year 2018
Size 18 cm × 24 cm/Pages 216
Paperback/₹ 345.00

This book provides detailed information on various instruments, techniques and experiment protocols of biochemistry and molecular biology. It deals with basic as well as advanced information and in-depth methodology in simple language to help students and professionals to perform experiments with ease.

This book not only clears the practical concepts of Biochemistry and Molecular Biology at undergraduate and post- graduation levels, but also helps to pass the Ph.D. course work exam conducted by various universities. This book will develop research aptitude to clear the NET examination.

This manual gives a comprehensive idea about the various instruments, their working, troubleshooting and their applications. It provides a wide spectrum of 14 chapters covering basic as well as advanced techniques and instrumentation, viz., Gas Chromatography (GC), Mass Spectrometry (MS), Scanning Electron Microscope (SEM), X-Ray Diffraction (XRD) and Fourier Transform Infrared Spectroscopy (FTIR) with detailed protocols.

Most of the experiments can be easily performed in the laboratory having basic facilities. Historical background, experiment nature, its principle, step-by-step procedure with diagrammatic representation and important precautions are given in the beginning of each experiment.

Salient Features:

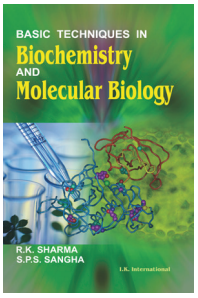
- Detailed information on various instruments, techniques and experiment protocols.
- Basic, advanced information as well as in-depth methodology.
- Wide spectrum of 14 chapters covering basic as well as advanced techniques and instrumentation.

Contents:

General introduction/Instrumentation/Techniques/Carbohydrate/Protein/Amino acid/Enzymes/Oil & fats/Vitamins/Anti-nutritional factors/Phenols/Pigments/Nucleic acids/Nutritional and clinical biochemistry/Appendix

Audience – Undergraduate, postgraduate and research scholars of biochemistry, biotechnology, and environmental sciences

Basic Techniques in Biochemistry and Molecular Biology



R.K. Sharma • S.P.S. Sangha

ISBN: 978-81-907462-6-7/Year 2009
Size 14 cm × 21.5 cm/Pages 280
Paperback/₹ 345.00

Fundamentals of biochemistry and molecular biology is an important component of all disciplines of Biology.

In the era of multidisciplinary approach, the basic techniques in Biochemistry and Molecular Biology are much needed by the students of Botany, Zoology, Microbiology, Biotechnology, Fisheries, Veterinary, Pharmacology, Physiology, Medicine, Genetics, Agriculture and allied subjects both at undergraduate and postgraduate levels.

This book includes 15 chapters covering more than 135 experimental protocols. It discusses all the relevant topics like pH and buffers, spectrophotometry, chromatography, carbohydrates, lipids, proteins, electrophoresis, enzyme immunology, vitamins and pigments, metabolites and molecular biology. It includes a wide range of experiments from preparation of culture media to PCR, Southern and Western blotting. All the experiments have been meticulously designed and special care has been taken to the safety in laboratory and precautions are given wheresoever required.

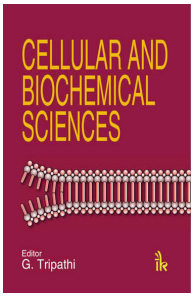
Contents:

General Introduction/pH and Buffers/Spectrophotometry/Centrifugation and Cell Fractionation/Chromatography/Carbohydrates/Lipids/Amino Acids and Proteins/Nucleic Acids/Electrophoresis/Immunology/Enzymes/Metabolites/Vitamins, Hormones and Pigments/Molecular Biology/Appendices

Audience – Students of Undergraduate and Postgraduate levels

Shelving – Botany, Zoology, Biochemistry, Biotechnology and Microbiology.

Cellular and Biochemical Sciences



Editor

G. Tripathi

ISBN: 978-81-88237-85-2/Year 2010
Size 18 cm × 24 cm/Pages 1392
Paperback/₹ 795.00

The fundamental aim of *Cellular and Biochemical Sciences* is to emphasize diversified topics of current interest to postgraduate students pursuing different courses in the areas of Biological Science including Zoology, Botany, Biochemistry, Biotechnology, Bioengineering and Pharmacology. A topic on concept and applications of bioinformatics has also been incorporated. About 58 topics have been included in the book and some of the topics are rarely found in other books of Biology. New information has been introduced which updates existing knowledge and enables the book to justify its claim as the most comprehensive text in the Cellular and Biochemical Sciences. Each chapter has been designed in a lucid and readable manner. There are references, suggested readings, long questions and objective questions in each chapter. The text will also be relevant to the students of Cell Biology, Biochemistry and Biotechnology.

Contents:

1. Cell Organelles and Cell Cycle/2. Biocatalysis and Kinetic/3. Hormone and Signal Transduction/4. Structure and Function of Nucleic Acids/5. Chromosome and H=eterochromatization/6. Mutation and Transposition/7. Differentiation and Development/8. Immunity and Monoclonal Antibodies/9. Genomics and Proteomics/10. Polymerase Chain Reaction and Gene Silencing/11. Carcinogensis, Disorders and Detoxification/12. Gene Technology and its Application/13. Tissue Culture and Liposome Technology/14. Microbes, Toxins and Antibiotics/15. Nucleic Acid Sequencing and Hybridization/16. Electrophoresis and Cytometry/17. Gel Filtration and Chromatography/18. Biophysical Methods in Biology/19. Bioinformatics:

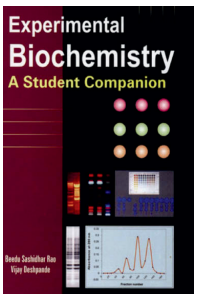
Audience – UG and PG students of Life Sciences, candidates preparing for NET, SLET, civil services and other competitive exams.

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Experimental Biochemistry

A Student Companion



B. Sashidhar Rao • Vijay Deshpande

ISBN: 978-81-88237-41-8/Year 2005
Size 16 cm × 24 cm/Pages 316
Paperback/₹ 455.00

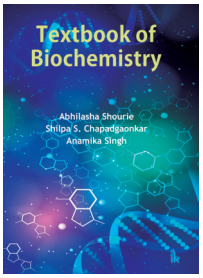
Experimental Biochemistry: A Student Companion is a purpose-oriented, practical laboratory manual for students pursuing biochemistry as a subject module at various universities. This book presents a concise account of biochemical experiments based on a concept-oriented approach. An important intent in designing this book is to fortify the students' ability to perform an experiment in the laboratory. The coverage of the subject area includes complete experimental procedures and workouts in the qualitative & quantitative biochemical analysis, enzymology, biochemical separation techniques, biochemical preparations, clinical biochemistry, immunoanalytical techniques and food biochemistry. Due emphasis has been given to laboratory safety and hygiene. This book will be of interest to a wide audience ranging from students & instructors to researchers in the field.

Contents:

Laboratory Safety and Hygiene/Units and Measurements/Basic Statistical Concepts for Biochemical Analysis/Basic Concepts and Use of Instruments in Biochemical Analysis/pH and Buffers/ QualitativeAnalysis/Quantitative Analysis/Biochemical Separation Techniques/Biochemical Preparations/Enzyme Assays/Clinical Biochemistry/ImmunochemicalMethods/FoodAnalysis/Appendix/ Index.

Audience – B.Sc. (Gen.), B.Sc. (Hons), B.Sc. (Pharmacy), B.Tech. (Biotechnology), MBBS, B.Sc. (Agr.) and M.Sc. Courses having Practical Biochemistry Module.

Textbook of Biochemistry



Abhilasha Shourie
Shilpa S. Chapadgaonkar
Anamika Singh

ISBN: 978-93-86768-55-1/Year 2020
Size: 18 × 24 cm/Pages 472
Paperback/₹ 645.00

Biochemistry is the study of chemical processes within and relating to living organisms. Biochemical processes give rise to complexity of life. Biochemistry deals with the structures, functions and interactions of biological macromolecules, such as proteins, nucleic acids, carbohydrates and lipids, which provide the structure of cells and perform many functions of life.

This book offers a comprehensive coverage of biochemical systems, structures, and metabolic reactions within the organism while emphasizing on the nutritional aspects of biochemicals.

The chapters are designed such that it covers all the concepts from the basic to the complex, to help the students understand key concepts and appreciate the significant connections among biochemistry, physiology, nutrition and human health.

In this text, individual disciplines are treated in an integrated manner to provide sound foundation in the subject.

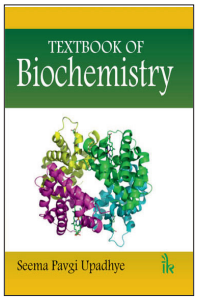
The book is particularly meant for the students from undergraduate and postgraduate courses in life sciences, health sciences, pharmaceutical sciences and other related fields, since it gives fundamental knowledge of biochemistry and explains well the metabolic and physiological roles of biomolecules.

Contents:

Introduction to Biochemistry/Water: The Unique Solvent/ Carbohydrates/Lipids/Proteins-I/Proteins-II/Nucleic Acids/Enzymes/ Photosynthesis/Carbohydrate Metabolism/Electron Transport and Oxidative Phosphorylation/Biosynthesis of Lipids/Lipid Catabolism/Biosynthesis of Amino Acids/Catabolism of Amino Acids/Nucleotide Metabolism/Hormones/Index

Audience – UG & PG student of Life Science, Pharmacy.

Textbook of Biochemistry



Seema Pavgi Upadhye

ISBN: 978-93-80578-72-9/Year 2012
Size 18 cm × 24 cm/Pages 552
Paperback/₹ 505.00

Biochemistry is the study of the structure, composition, and chemical reactions of substances in the living systems. Biochemistry became a separate field when scientists combined biology with organic, inorganic, or physical chemistry and began to study such topics as how living things obtain energy from food, the chemical basis of genetics. Biochemistry includes the sciences of molecular biology; immuno-chemistry; neurochemistry; and bio-inorganic, bioorganic, and biophysical chemistry.

The major goal of this book is to provide life science students, the basics of bio-chemistry in simple and interesting manner.

To make it more explanatory the whole content is divided in 27 chapters spread in three major sections, i.e., The Molecular Concept of Life; Biosynthesis and Breakdown of Biomolecules and Transfer of Genetic Informations.

Salient Features:

- At the end of each chapter, there is a glossary to find out word meanings.
- At the end of each chapter, there is a summary to understand the subject in short, followed by questions and references.
- Matter is covered in an easy way and is explained with the help of diagrams.

Contents:

Section I: The Molecular Concept of Life

Cell Structure/Cell Environment/Bioenergetics/Carbohydrates/Lipids and Membrane/Amino Acids/Proteins I – Properties, Amino Acid Sequence and Purification/Proteins II – Three Dimensional Structure of Proteins/Enzymes I – Classification and Kinetics/Enzymes II – Mechanism, Structure and Regulation/Nucleic Acids

Section II: Biosynthesis and Breakdown of Biomolecules

Metabolism/Carbohydrate Metabolism-I: Glycolysis, Gluconeogenesis, Pantose Phosphate Pathway/Carbohydrates Metabolism II: TCA Cycle and, Oxidative Phosphorylation/Photosynthesis/Lipid Metabolism-I: Fatty Acids and Triacylglycerols/Lipid Metabolism-II: Membrane Lipids and Cholesterol/Amino Acid Metabolism/ Purine and Pyrimidine Nucleotide Metabolism/Hormones-I: Animal Hormones/Hormones-II: Plant Growth Substances/Vitamins and Coenzymes

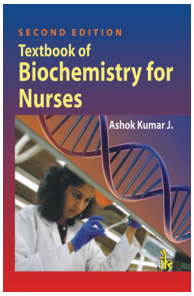
Section III: Transfer of Genetic Information

Replication of DNA/DNA Manipulation and its Application/ Transcription/Protein Synthesis/Control of Gene Expression/ Glossary/Index

Audience – Undergraduate and postgraduate students of biochemistry.

Textbook of
Biochemistry for Nurses

Second Edition



Ashok Kumar J.

ISBN: 978-93-81141-28-1/Year 2011
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 405.00

A sound knowledge of biochemistry is necessary for understanding the pathophysiology of disease, its diagnosis, treatment and follow-up. Since the nursing community works closely in association with clinicians in patient care, it is important for them to be aware of the biochemical aspects of human diseases.

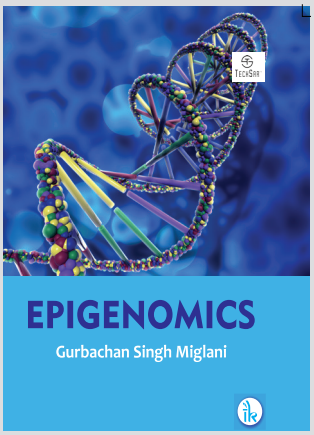
Textbook of Biochemistry for Nurses including nutrition has been designed to cater to the needs of the nursing students. It is an effort to present biochemistry for nurses including certain topics of nutrition in simple and understandable form. This book is useful for B.Sc. nursing, PCBSc nursing students and paramedical courses.

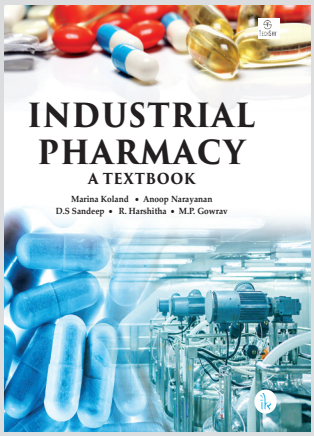
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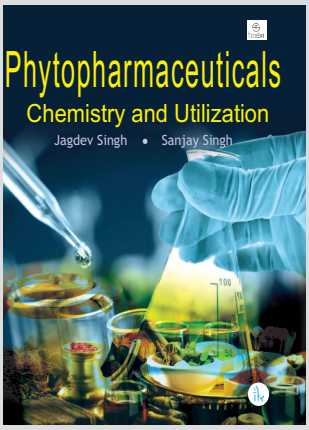
Cell and Cell Membrane / Acids, Bases, and Buffers / Chemistry of Proteins / Tissue Proteins / Enzymes / Chemistry of Carbohydrates / Lipids / Digestion and Absorption / Intermediary Metabolism / Carbohydrate Metabolism / Lipid Metabolism / Protein Metabolism / Heme / Immunoglobulins / Nucleic Acids / Protein Biosynthesis / Acid-Base and Water Electrolyte Balance / Renal Function Tests / Specimen Collection / Vitamins / Mineral Metabolism / History of Nutrition; Nutritional Problems in India; National Nutrition Policy; Factors affecting the Nutritional Status / Toxins in Food; Medical Value of Food, Food Adulteration, Food Standards, Cookery Rules and Preservation of Nutrients / Carbohydrates, Lipids, Proteins and Malnutrition / Food Groups; Energy Requirement and Balanced Diet; Dietary Principles in Diseases Condition; Nutritional Education / Appendices / Index

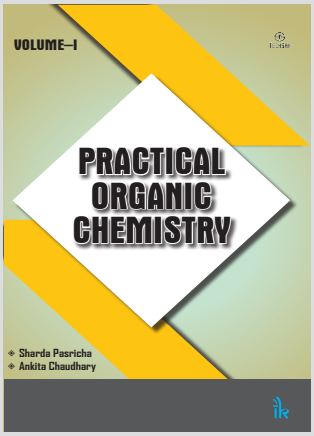
Audience – B.Sc. nursing, PCBSc nursing students and paramedical courses.

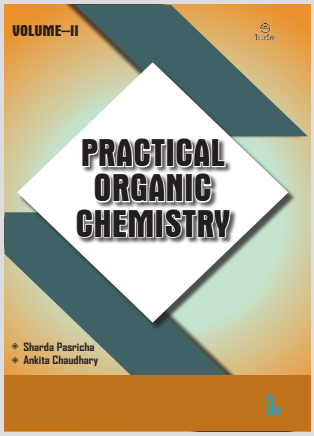
NEW RELEASES

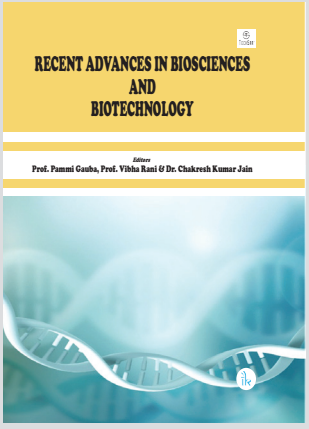






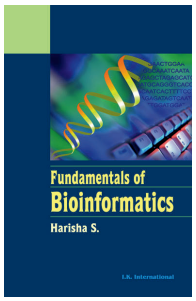






The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Fundamentals of **Bioinformatics**



Harisha S.

ISBN: 978-81-89866-41-9/Year 2007
Size 16 cm × 24 cm/Pages 276
Paperback/₹ 375.00

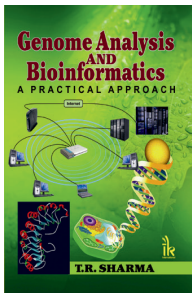
Bioinformatics is an upcoming discipline of Life Sciences. It is an integration of computer science, and mathematical and statistical methods to manage and analyze the biological data. The fundamental issues that directly impact an understanding of life at structural, functional and molecular level, and regulation of gene expression can be studied by using bioinformatics tools. *Fundamentals of Bioinformatics* is a comprehensive book for undergraduates, postgraduates and research scholars, who urge to learn about theoretical as well as practical aspects of this upcoming field. This pioneering book provides up-to-date information on bioinformatics and emphasizes recent topics like drug design technology, pharmacogenomics, proteomics and genomics. The present textbook will be an asset to Life sciences and technology institutions, since it has been designed based on the prescribed syllabus of various Indian Universities and aboard, and cover all the important topics on Bioinformatics.

Contents:

Bioinformatics/Database/Sequence Alignment and Database Searching/Phylogenetic Analysis/Predictive Methods/Plasmid Mapping and Primer Design/Proteomics and Genomics/Drug Design Methodology/List of Bioinformatics software/GCG Wisconsin Package/Appendix/Index.

Audience – Graduates, Postgraduates and Research Scholars in Bioinformatics.

Genome Analysis and Bioinformatics
A Practical Approach



T.R. Sharma

ISBN: 978-93-80026-36-7/Year 2009
Size 16 cm × 24 cm/Pages 224
Paperback/₹ 355.00

With the decoding of whole genome sequences of many organisms, new vistas of research have emerged in computational biology. The scientific community has free access to the genome sequence data from the public databases. Many times, it is really hard to make sense of these huge data of DNA and protein sequences. Therefore, bioinformatics tools are used to handle, store and analyze genome sequence data for the benefit of mankind. The book has been written in a simplest possible manner so that every one should understand the basic concepts of genome sequence analysis and bioinformatics. The book is structured in such a way so that readers should first know about how whole genome sequences are generated by using high throughput DNA sequencing technologies and then storing of sequences in biological databases. Second part deals with the basic principles involved in sequence analysis and applications of softwares along with practical exercises. Thirdly, data mining approaches for the discovery of genes and DNA markers have also been discussed. Besides, glossary of important terms and introduction to basic bioinformatics software has been included.

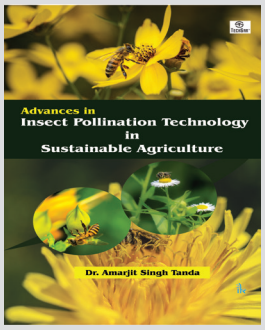
The book will serve as a textbook to the B. Tech. (Bioinformatics & Biotechnology) students and would also be useful to the postgraduate students and research scientists working in the areas of life sciences, genomics, biotechnology and molecular biology as well as Masters in Computer Applications (MCA) who are interested in bioinformatics.

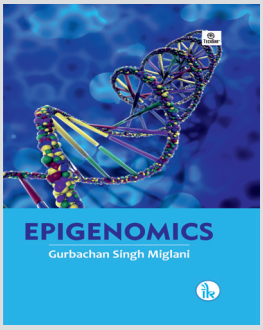
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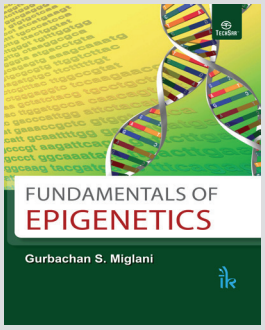
Introduction/High Throughput Genome Sequencing/Genome Assembly and Finishing/Genome Databases/Pair-wise Sequence Alignment/Similarity Searches Software and their Applications/ Multiple Sequence Alignment/Phylogenetic Analysis/Gene Prediction and Annotation/DNA Marker Data Analysis/Data Mining for DNA Markers Discovery/Polymerase Chain Reaction and PCR Primer Design/Appendices/Index.

Audience – B. Tech (Bioinformatics & Biotechnology) PG & researchers in the areas of life sciences, genomics, biotechnology molecular biology and MCA.

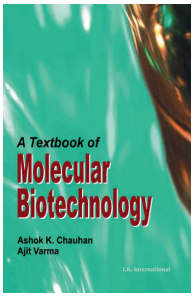
NEW RELEASES







A Textbook of Molecular Biotechnology



Ashok K. Chauhan • Ajit Varma

ISBN: 978-93-80026-37-4/Year 2009
Size 18 cm × 24 cm/Pages 1354
Paperback/₹ 895.00

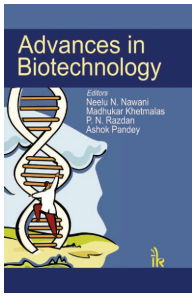
A Textbook of Molecular Biotechnology covers an amazing range of topics from the basic structure of the cell and diversity of micro-organisms to the latest techniques in the field of biotechnology. Various topics have been included for the benefit of graduate and postgraduate students. In addition, the book will be of immense help for the researchers and can be used as a laboratory manual for various biotechnological techniques. A number of reputed subject experts, scientists, academicians, and researchers from North America, Europe, Arabian and Asian countries have contributed their chapters to this volume. The book is designed to give a detailed description of basic as well as applied biotechnology. This book describes the role of basic biotechnological tools in various spheres of human society, namely, agriculture, environment, drugs, pharmaceuticals, food, and fermentation industries etc. The book also covers the latest state-of-art in nanobiotechnology, bioinformatics, nutrigenomics, proteomics, metagenomics, and intellectual property rights (IPR). The book contains 61 chapters dealing with the following topics.

Sectional Contents:

I. Basics of Molecular Biotechnology / II. Recent Advancements in Biotechnology / III. Microorganisms in Agricultural Biotechnology / IV. Nanobiotechnology / V. Industrial Biotechnology / VI. Biotechnological Approach to Microbial World / VII. Modern Tools and Techniques / VIII. Market Strategies.

Audience – Postgraduate and Research Students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology.

Advances in Biotechnology



Editors

Neelu N. Nawani
Madhukar Khetmalas
P. N. Razdan • Ashok Pandey

ISBN: 978-93-84588-09-0/Year 2015
Size 16 cm × 24 cm/Pages 268
Hardback/₹ 2995.00

Biotechnology relates innovations to basic sciences and leads to development of technologies for the benefit of mankind. Past few years have witnessed a good response to Biotechnology in terms of student strength, government support, public-private partnerships and faculty research. Success examples of commercialization of biotechnology related products and processes are leading researchers towards technopreneur programs whole heartedly supported by all countries.

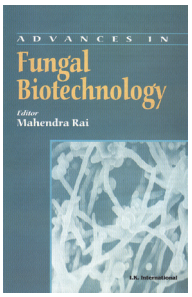
This book is an exemplary representation of interdisciplinary research with industrial and societal relevance. The chapters represent advances in various sub-disciplines of Biotechnology with special focus on biological synthesis of industrial compounds, value added products from waste, genetic engineering for novel biomolecules, bioremediation, biofuels and medicinal compounds. The chapters of this book are contributed by eminent academicians and researchers across the globe. The book can be used as a reference book as well as a textbook. Each chapter is well illustrated with relevant figures, tables and references which make the book simple and self-explanatory.

Contents:

Synthetic potential of cell bound glycosylhydrolases in alkyl glycoside and oligosaccharide synthesis/Biofuels and value-added products from extremophiles/Bioproducts from residual lignocellulosic biomass/Value-addition to agro-industrial by-products/Multi-drug resistance in vibrios-never underestimate bacteria/Anticancer activity of therapeutic agents conjugated with metal nanoparticles/The relation between the actinobacterial succession and microbial safety in aerobic waste treatment (composting)/Biorefinery applications through catalytic hydrogenation of platform molecules/Use of anaerobic soil microbes in biodegradation of explosive chemicals/Bacterial degradation of linear alkylbenzene sulfonate detergents/14C-labeled lactose uptake rate by kefir during whey fermentation, in the presence of promoters/Microbial biopolymers for edible film and coating applications/Data mining and bioprospecting: in pursuit of more efficient enantioselective hydantoinases for the synthesis of optically pure amino acids/Index

Audience – Post-graduate and Research Scholars in Biotechnology.

Advances in Fungal Biotechnology



Editor

Mahendra Rai

ISBN: 978-81-89866-53-2/Year 2009
Size 16 cm × 24 cm/Pages 528
Hardback/₹ 2295.00

In the past two decades, fungal biotechnology has progressed with fast pace. Advances in fungal biotechnology is an important publication representing these advances and multiple roles played by fungi. This includes mostly industrial applications of fungi for the production of pigments, citric acid and vitamins, beneficial effects of mycorrhizal fungi, mycoviruses, biotransformation, and also various health implications.

Salient Features:

- Focuses on biocontrol strategies by fungi.
- Deals with the role of fungal enzymes—xylanases and laccases.
- Discusses mycoviruses as an emerging tool for controlling pathogenic fungi.
- Incorporates industrial applications like production of pigmentscitric acid and vitamins.
- Addresses biotransformation by fungi.
- Illustrates the role of mycorrhizal fungi in revegetation programmes.
- Contains health implications (allergy, mycotoxins, tinea infections).
- Includes role of internet in Mycology.

The book is essential reading for students, teachers and researchers of Botany, Mycology, Biotechnology, Microbiology and researchers working on sustainable technologies.

Contents:

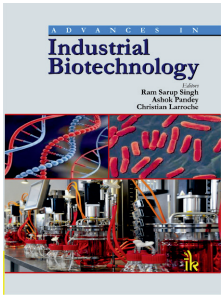
Developing Weed Control Technologies with Fungi/Management of Plant Pathogenic Fungi by Mycoviruses/Biotechnology: A New Tack on Fungal Resistant Crops/Properties and Commercial Applications of Xylanases from Fungi/Laccases of Fungi in Nature and Biotechnology/Enzymes from Mushrooms and their Industrial Applications/Pigments from Fungi: Industrial Perpspective/ Microbial Transformation by Beauveria bassiana/Biotransformation of Terpenes by Fungi/Molecular and Physiological Aspects of Relevance in the Design of Industrial Strains of Lactose/Galactose-Metabolising Yeasts for Biotechnological Applications/Current advances in Citric Acid Production by Fungi/Arbuscular Mycorrhizal Fungi used as Biofertilizers in Revegetation Programmes/Ectomycorrhizal Fungi and its Application in Forest Nursery/Bioproduction and Significance of Fungal Vitamins/Fungi from Indoor Environments in USA: An Overview/Recent Methods for Molecular Study of Fungal Community Structure with Special Reference to DGGE and TGGE/Tinea Capitis: Causal Organisms, Prognosis and Therapy/The Health Implications of Antifungal Drugs and Mycotoxin Interactions in Chronic Toxigenic Mold Exposures/The Impact of the Internet on Mycology/Index.

Audience – Students, teachers and researchers of Botany, Mycology, Biotechnology, Microbiology and researchers working on sustainable. technologies.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Advances in Industrial Biotechnology



Editors

Ram Sarup Singh • Ashok Pandey
Christian Larroche

ISBN: 978-93-82332-76-3/Year 2014
Size 18 cm × 24 cm/Pages 520
Hardback/₹ 4095.00

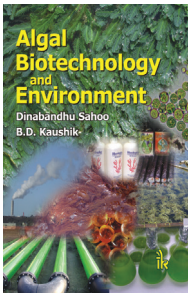
This book covers the most comprehensive and recent advances & developments in Industrial Biotechnology. The aim of the book is to provide an authentic account of Biotechnology in industrial applications as well as to stimulate research in Industrial Biotechnology. It also highlights future needs of research on the various aspects of Industrial Biotechnology. This book would be a good source for post graduate classes as a Research-cum-Textbook. It would be very useful both from teaching and research point of view. Applied aspects are systematically covered so that students can take relevant assignments in Industrial Biotechnology. All the chapters in the book are contributed by the experts in their respective fields of research. The book is illustrated with tables and figures along with recent references. The manuscript is incomparable resource for the biotechnologists, fermentation technologists, biochemical engineers, microbiologists and students of these disciplines. Manuscript would be very useful to both the academia and the industrialists.

Contents:

Industrial biotechnology: An overview/Manipulating *aspergillus niger* genome: A journey/Scaling-up of microbial fuel cell using clay membrane separator and non-catalyzed electrode materials/Hydroxy acids: Production and applications/Bacterial xylanases: Production, purification and applications/Biorefinery prospects: A study on pine litter feedstock/Butanol production from lignocellulosics/ Pretreatment of lignocelluloses for biogas and ethanol processes/Plant growth promoting rhizobacteria (PGPR): Back to the roots/Bio-prospecting of indigenous yeast isolates of fermented foods of north-western himalayas/Probiotics today: Charting new directions/Non dairy probiotic beverage as potent functional food/Coatings of bio-based materials on flexible food packaging: Opportunities for problem solving and innovations/Assessing food safety and food quality through proteomic and peptidomic tools/Pullulan as therapeutic tool in biomedical applications/Chitinases and chitinase-like proteins: Ubiquity and potential in therapeutics/Current status of microbial lectins in biomedical research/Studies on a pharmaceutically important antioxidant-glutathione/Role of infectious agents in cardiovascular diseases/Nanoparticle gold in wild and resistant leishmaniasi/New submerged membrane bioreactors (SMBRs) for sustainable water/Use of microbes in biological treatment of shrimp wastewater in the united states/Bioremediation of hazardous Di(2-ethylhexyl) phthalate/Biotechnological approaches for valorization of whey/Management of organic wastes by vermicomposting.

Audience – Biotechnologists, fermentation technologists, biochemical engineers, microbiologists and students of these disciplines.

Algal Biotechnology and Environment



Editors

Dinabandhu Sahoo • B.D. Kaushik

ISBN: 978-93-81141-71-7/Year 2012
Size 18 cm × 24 cm/Pages 346
Hardback/₹ 1595.00

Algae grow in a wide range of habitats starting from freshwater lakes to rivers and oceans to deserts. They serve a very important role not only in the aquatic ecosystem as primary producers but are also responsible for release of oxygen into the atmosphere. Algae and their products are widely used in food, agriculture and a number of industries. In recent years it has been realized that algae can play a major role in environment and biotechnology. The present book contains 34 chapters covering diverse aspects of algae. Hence, this book will be very useful for the students, researchers, university teachers and people from a wide spectrum.

Contents:

Effect of Temperature and Ammonium on Growth, Pigment Production and Nitrogen Uptake by Four Species of *Porphyra* (Bangiales, Rhodophyta) Native to the New England Coast / Improvement of *Gracilaria* Agar Solubility by Acid Treatments / Seaweed Community Analysis of a Rocky Shore for the Sustainable Seaweed Integrated Aquaculture System (SSIAS) in Korea / Succession of seaweed Communities on Artificial Reefs and Marine Ranching in Japan / Seaweeds: A Potential Source of Biofertilizer / On the Occurrence of *Dichotomosiphon tuberosus* (A. Br.) Ernst from Ahmednagar, Maharashtra, India / Biochemical Composition of Some Freshwater Green Algae from Pravara basin Region, Ahmednagar, Maharashtra, India / Effect of Blue-Green Algae as Biofertilizer on growth and Yield of Chilli (*Capsicum annum* L.) Var. Phule Jyoti / Cyanophycean Algae from Soils of Pravara Canal Command Area, Ahmednagar, Maharashtra, India / Chlorophycean Algae of Ahmednagar, Maharashtra, India / Studies onHydrobiology of Godawari River at Nasik, Maharashtra, India / Impact of Heavy Metal(s) on Accessor Pigments of *Anabaena oryzae* (Fritsch) / Cyanobacterial Flora of Rice Fields of North Telangana Region, Andhra Pradesh, India / Seaweeds as a Source of Bioethanol / Ecology and PCR based Molecular Characterization of Cyanobacteria with Special Emphasis on Oscillatoriales and Nostocales / Free Amino Acids, Total carbon, Total Nitrogen, and Phycobiliproteins Content in *Porphyra* sp. after a Short Term Nutrient Uptake / Phycodiversity of River Pandu, Uttar Pradesh in Relation to Anthorpogenic Stress / Use of *Lyngbya limnetica* (Blue-green Alga) in the Treatment of Cattle Shed Wastewater / Studies on Biodegradation Potential of Linear Alkyl Benzene Sulphonate by *Nostoc muscorum* Ag. ex. Born et Flah / Astaxanthin Production from Green Alga *Haematococcus* under Autotrophic and Heterotrophic Conditions / Saturated and Unsaturated Hydrocarbon Production from *Botryococcus braunii* sp. from Indian Freshwater Bodies and Culture Collection Centers / Treatment of CETP Effluent bya Seaweed Associated *Aspergillus niger* Isolate / Comparative Physiological Studies amongst Cyanobacteial Isolates from Paddy Fields / Effect of Salinity on the Growth of *Oscillatoria proboscidea*, a Freshwater Alga / Influence of Salinity Changes on the Morphology of *Cladophora vagabunda* (Linn.) Hoek / Ecological Study of Ujani Dam Backwater at Siddhteka Tal, Karjat, Ahmednagar, Maharashtra, India / Studies on Genus *Vaucheria* of Jammu Region / Biodiversity of Freshwater Algae in Some Districts of Tamil Nadu, India / UV-B Radiation and High Induced Oxidative Damage in *Phormidium corium* / Intracellular Localization and Gene of rubisco in *Enteromorpha clathrata* (Ulvales, Chlorophyta) / Mariculture of Seaweeds Based on the New "Germling Cluster Method" and Utilizing Deep Seawater in Japan / Algal Diversity in Wetlands / Primary and Secondary Metabolites in *Caulerpa sertularioides* and *C. peltata* / Studies onthe Alga Flora of Lake Jaisamand in Udaipur, Rajasthan, India / Index

Audience: Students, researchers, Botany, Biotechnology and Agriculture.

An Introduction to Biotechnology
A Genetic Manipulation Perspective



Editor

Rup Lal

ISBN: 978-93-84588-86-1/Year 2016
Size 16 cm × 24 cm/Pages 218
Paperback/₹ 385.00

An Introduction to Biotechnology: A Genetic Manipulation Perspective contains practical exercises, and has a comprehensive coverage on the subjects of biotechnology and gene manipulation for the

students' understanding of the basic concepts. This manual contains, in particular, the techniques, protocols and practical approaches that are being used routinely in molecular biology laboratories. This book is assembled together with an aim to enlighten the readers with the complex molecular biology protocols in a simple and straightforward manner. In addition, this manual also introduces readers to the study of gene manipulation in Gram-negative as well as Gram-positive bacteria. All these methods and protocols have been regularly used in the editor's laboratory and have been modified from time to time. This practical handbook overcomes the limitations of other manuals by providing an in-depth methodology in a systematic way, blending the underlying theoretical aspects, thus facilitating the readers in understanding the reason behind every step followed during the experimental work.

Salient Features:

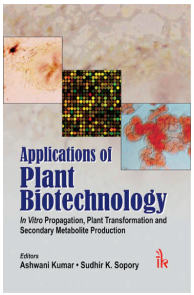
- Is a unique combination of protocols that are specially designed for undergraduate and postgraduate students and for those who are perusing research and teaching in Biotechnology, Molecular Biology, Botany, Zoology, Life Sciences and Microbiology.
- Contains primary protocols for nucleic acid isolation, protein isolation, restriction digestion, ligation, cloning, transformation, Southern hybridization and sequencing.
- Every chapter is well-structured and is divided into various sections: Introduction, Learning objectives, Requirements, Theoretical aspects, Procedure, Results, Discussion, Frequently asked questions and References.

Contents:

Introduction to Biotechnology/ Introduction to Gene Manipulation/ Preparation of Media and Chemicals/ Growth and Maintenance of Culture/ Isolation of Genomic DNA/ Isolation of Plasmid DNA/ Isolation of RNA/ Visualization of Nucleic Acids and Proteins/ Whole Cell Protein Isolation and SDS Page/ Quantification of DNA/ Primer Designing/ Polymerase Chain Reaction (PCR)/ Restriction Digestion/ Purification of DNA from an Agarose Gel/ Ligation/ Transformation/ Cloning and Cloning Vectors/ DNA Blot Hybridization/ DNA Sequencing

Audience – UG/PG/Research students of Biotechnology, Genetics and other related fields in life sciences.

Applications of Plant Biotechnology
In vitro Propagation, Plant Transformations and Secondary Metabolite Production



Editors

Ashwani Kumar • Sudhir K. Sopory

ISBN: 978-93-80026-93-0/Year 2010
Size 18 cm × 24 cm/Pages 624
Hardback/₹ 3995.00

This book provides a general introduction of plant tissue culture followed by specific applications of biotechnology in regeneration of rice (*Oryza sativa*), Maize, Eucalyptus, hot pepper, guava (*Psidium guajava* L.) stone fruit (*Pinis pinea*) and compares the features of in vitro grown plant to in vivo plants, Transgenic plants production and application, generating marker-free transgenic plants, genetic engineering and metabolic engineering of plant, molecular farming, abiotic stress tolerance, transgenic in floriculture and ornamental plants, celery, secondary metabolite production with special reference to sennoside, genetic transformation of potato and biosafety concerns, bioinformatics and its application to crop improvement, Intellectual property rights, biotechnological aspects of secondary metabolite production, application of biotechnology in pharmaceutical sciences and production of recombinant proteins, cyclotides, Hypericum perforatum and Gentiana punctata provide a selected survey of key advances in the fascinating field of plant cell and tissue culture as a tool in biotechnology. Besides covering basic techniques employed in leading laboratories worldwide, follows an extended account of important applications in, for example, plant propagation, gene technology and secondary metabolite production. The book will prove useful to both students and researchers of biotechnology, agriculture, horticulture, forestry as well as for the industry.

Sectional Contents:

Tissue Culture : Historical Perspectives and Applications

SECTION I : *In Vitro* Plant Regeneration

SECTION II : Transgenic Plants and Their Appllications

SECTION III : Secondary Metabolites and Medicinal Plants

Index.

Audience – PG and Research Students, Scientists, Engineers, Biological Plant, Mirobiology, Bioengineering, Bioinformatics and Biotechnology.

Applied Biotechnology



Editors

Sudhir U. Meshram • G.B. Shinde

ISBN: 978-93-80026-56-5/Year 2009
Size 18 cm × 24 cm/Pages 224
Hardback/₹ 795.00

This book vividly brings out the complexities, intricacies and constraints in developing and adopting appropriate sustainable technologies in the applied fields of Agriculture, Environment, Biomedical & Animal Genetic Engineering, Immunology etc. It covers Biosensors, Bioremediation, Biofertilizers, Fermentation, Immunization, DNA Transportation, Biopesticides, Sustainable strategies, Agriculture, Animal & Health Sectors etc. It will be of great use not only to teachers and students of Biotechnology and Life Sciences and also to farm scientists, extension managers, policy makers and administrators alike.

The readers, through this book, will explore new avenues to alleviate the human & other biospheric sufferings because of poverty, ignorance, mismanagement and diseases particularly in developing countries.

Spread in 28 chapters the book discusses:

- Recombinant DNA Technology
- Sustainable Biotechnology
- Immunology, Toxicology and Animal Biotechnology
- Microbial Fermentation and Biotechnology

Contents:

Biotech-Advancing Towards Another Revolution/Global Sustainable - 2nd Biotech Congress/Bacterial Proteins in Potential Cancer Therapy/**SECTION - I : RECOMBINANT DNA TECHNOLOGY**/A DNA Helicase from P. Falciparum is Bipolar and its Activities are Modulated by Phosphorylation/IPR in Management of Genetic Resources/Bioremediation using Radioresistant Microbes/ Transgenic Crops: Approaches to Avoid User Reservation and Resistance/Alive with Dead: Overexpression of a Dead-Box Helicase Confers/Salinity Tolerance in Plants/ **SECTION - II : SUSTAINABLE BIOTECHNOLOGY**/Global Sustainable Biotechnology: Action for Human Welfare/ Biotechnology for Global Sustainable Development/Management of Waste Lands/Barren Land Through Cyanobacteria and Rice Production/Rhizobacteria as Biocontrol Agents/Biodiversity and Conservation of Tasar Ecoraces/ Bioenergy: an in-Thing in Bharatdesh as an Indigenous Technology/ Biotechnology: For Sustainable Development/White Paper: On the Future of Sustainable Biotechnology/Biodiversity Conservation for Biotech /Role of Biofertilizers and Organic Matter in Sustainable Agriculture /Green Chemistry-Global Sustainable Technology/ **SECTION - III : IMMUNOLOGY, TOXICOLOGY AND ANIMAL BIOTECHNOLOGY**/Stem Cells and Regenerative Biology/Role and Advantages of Biotechnology in Vaccine Development/Transgenic Products/ Horizons in Animal Biotechnology, Immunology and Toxicology/ Environment - A Reservoir of Pollutants/**SECTION - IV : MICROBIAL FERMENTATION AND BIOTECHNOLOGY**/ Cold-Adapted Enzymes: Fundamentals and Biotechnological Aspects/ Production of Enzymatic Complex by Aspergillus Niger

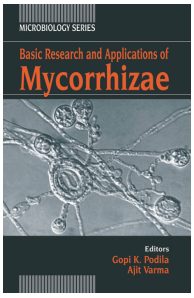
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+91-011-43205400 info@ikinternational.com

Used for Lignocellulose Degradation/Genomics in Aid of Microbial Fermentation of Waste Biomass into Bioenergy Bioproducts/ Feeding of Protists Upon Fluorescently Labelled Bacteria or Labelling of Fed Bacteria - The Flb Method In 21st Century/ Index

Audience – Teachers and students of Biotechnology and Life Sciences, farm scientists, extension managers, policy makers and administrators. Agriculture, Environment, Biomedical & Animal Genetic Engineering, Immunology.

Basic Research and Applications of Mycorrhizae



Editors

Gopi K. Podila • Ajit Varma

ISBN: 978-81-88237-22-7/Year 2005
Size 16 cm × 25 cm/Pages 525
Hardback/₹ 2495.00

Mycorrhizal research has grown by leaps and bounds in the past few decades. These fungi promise to promote plant growth, maintain plant and soil health, assist in bio-protection against root diseases, production with reduced fertilizer and pesticides & nutrient acquisition, affect soil skeletal structure holding primary soil particles together, are conducive to formation of microaggregate structures, higher rhizosphere population, symbiosis alters host water relations, alter root length and architecture. These fungi also help in re-vegetation of landscapes, golf courses or contaminated soils, biological hardening of tissue culture raised plants, postpone leaf dehydration, draught responses, osmo-protecting enzymes and enhance P acquisition. AM symbiosis could conceivably affect any of these steps. AMF should be considered an alternative to costly soil disinfection. The mechanisms by which fungi induce resistance in their hosts and enhance disease resistance need critical evaluation and examination. Editors see this volume as a tremendously valuable collection of specialized up-dated chapters describing the state-of-the-art and modern protocols in mycorrhizal research, seriously presented and synthesized.

Audience – Postgraduate and Research Students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology.

Bioanalytical Techniques



Sekhar Talluri

ISBN: 978-93-81141-70-0/Year 2012
Size 18 cm × 24 cm/Pages 280
Paperback/₹ 375.00

This book describes the principles of the bioanalytical techniques that are used in clinical diagnosis, pharma-ceutical analysis, bioprocess monitoring, environmental studies and life sciences research. The primary focus of this book is on instrumental methods which are evolving rapidly due to the availability of new technologies. The basic concepts of each technique are explained in as concise and simple a manner as possible, without sacrificing generality or rigour.

Part-I describes analytical methods that are based on the separation of particles (chromatography, electrophoresis, mass spectrometry, etc). Part-II describes methods based on spectro-scopy, scattering and diffraction. Part-III introduces some basic biochemical and molecular biological methods such as binding assays, PCR, protein sequencing and nucleic acid sequencing and is intended as background material for students who are interested in the topics described in Part-IV. Part-IV describes the basic concepts of novel micro- and nano-bioanalytical tech-niques which are based on biosensors, microarrays, microfluidics, surface plasmon resonance and nanomaterials. Part-IV is primarily for postgraduate students. However, adequate basics are provided to ensure that advanced undergraduates can also benefit from this section.

Contents:

Part I: Separation Techniques: Chromatography / Centrifugation / Electrophoresis / Mass Spectrometry

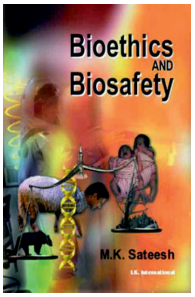
Part II: Spectroscopy, Scattering and Diffraction: UV and Visible Spectroscopy / Vibrational Spectroscopy / Fluorescence Spectroscopy / Magnetic Resonance / Scattering and Diffraction

Part III: Biochemical and Molecular Biological Methods: Radioactivity / Binding Assays / Polymerase Chain Reaction / Protein and Nucleic Acid Sequencing

Part IV: Micro- and Nano-Bioanalytical Techniques: Microscopy / Biosensors / Microarrays / Surface Plasmon Resonance / Biomicrofluidics / Nanobioanalytical Techniques / High Throughput Screening / Bibliography / Index.

Audience – UG and PG students of biotechnology.

Bioethics and Biosafety



M.K. Sateesh

ISBN: 978-81-906757-0-3/Year 2008
Size 18 cm × 24 cm/Pages 820
Paperback/₹ 845.00

The book has been divided in 29 chapters. It is an integrated approach to encompassing information on different aspects of biosafety and biothics and their applications in biotechnology. Simple, clearly understandable illustrations, correct and up to date informations are the main features of this book.

The book is intended not only for undergraduate and postgraduate students of biotechnology, genomics and related sciences, but is also aimed to draw attention of policy makers and teachers at national and international levels to the possible approaches in the field of biotechnology.

Salient Features:

• Covers the topics in depth from basic and deals with the key subject areas. • Takes a broader view of the earlier and current situation indifferent countries. • Gives the uses and their ethical aspects of the different technological developments made in the biotechnology fields. • Covers new developments in wider areas of biotechnology and its applications to mankind. • Deals with aspects of the Bioethics and Biosafety protocols and their implements. • Briefs the Indian Biodiversity Act.

Contents:

Introduction to Bioethics and Biosafety/Human Genome Project and their Ethical Issues/Molecular Detection of pre-Symptomatic Genetic Diseases and its Importance in Healthcare/Prenatal Diagnosis, Genetic/Manipulations and their Ethical Issues/ International Ethical, Legal and Social Implications of Human Genome Project/ Fetal Sex Determinations and Implications in India/Genetics Studies on Ethnic Races/Biosafety Guidelines and Regulations/Legal and Socioeconomic Impacts of Biotechnology/ Use of Genetically Modified Organisms and their Release in the Environment/Hazardous Materials used in Biotechnology: Handling and their Disposal/ Good Laboratory Practice (GLP) and Good Manufacturing Practice/ Public Education of Producing Transgenic Organisms/Intellectual Property Rights (IPRs)/ Intellectual Property Rights and Agricultural Technology and their Implications for India and other Developing Countries/ International Organizations an Intellectual Property Rights/Introduction to Patent and Process Involved in Patenting/ Patenting Living Organisms/Traditional Knowledge, Commercial Exploitation and Protection/Bioethics in Biodiversity and Resource Management/Ethical Issues in Genetically Modified Organisms: Foods and Crops/Labeling of Genetically Modified Food and Crops/ Stem Cell Research, Applications of Stems Cells and Ethical Issues

Involved in Stem Cell Research and Use/Use of Animals in Research and Testing, and Use of Alternatives for Animal in Research/ Animal Cloning, Human Cloning and their Ethical Aspects/Testing of Drugs on Human Volunteers/Organ Transplantation and Ethical Issues/ Public and Non-governmental Organizations (NGOs) Participation in Biosafety and Protection of Biodiversity/Indian Biodiversity Act/ Glossary/Appendix/Index.

Audience – Undergraduate and postgraduate students of Biotechnology, Genomics and related sciences.

Bioremediation of Pollutants



Editors

D.K. Maheshwari • R.C. Dubey

ISBN: 978-93-81141-05-2/Year 2012
Size 16 cm × 24 cm/Pages 322
Hardback/₹ 1595.00

The dramatic worldwide increase in the human population has created severe environmental problems. Soil and groundwater reservoirs have been polluted with pesticides, xenobiotics, agrochemicals, etc. The global consensus to eradicate inputs of toxic pollutants, which are perceived hazardous by consumers, have provided opportunities for the development of novel and benign sustainable environmental management strategies through exploitation of microorganisms.

The future of next generation depends upon our ability to enhance resources without causing damage to the environ-ment. One of the strategies is the application of effective microorganisms which are beneficial to both ecosystem and farmers. These contains seventeen chapters on various aspects of environmental microbiology and biotechnology. The chapters are devoted to abatement of pollutants generated by agriculturally contaminated soil, plastic waste from various industries.

The book also deals with rhizobacteria because they are rich in rhizospheric soil and acts as source of nitrogen, phos-phorus, phytohormones, enzymes, etc. They have proved to be highly active even in soil polluted with chemicals.

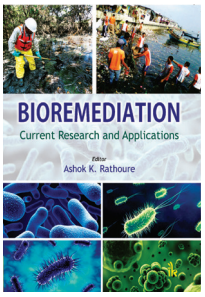
This book will certainly help the readers who have interest in the field of environment, microbiology, industrial engineering, biotechnology, botany, agricultural sciences and business and economics.

Contents:

Bacterial Degradation of Phenol and Cyanide from Industrial Wastewater / Bioremediation of Pesticides by Microorganisms: General Aspects and Recent Advances / Microbial Biodegradation—An Approach to Remediate Industrial Plastic Waste / Lichen Biodeterioration Studies in India: An Overview / Bioremediation of Contaminated Soils using Earthworms / Bioremediation and Cyanobacteria – An Overview / Role of Microbes in Bioremediation Technology / Microbial Removal of Arsenic: An Overview / Response of Ectomycorrhizal Pine Seedlings to Heavy Metal Pollution in Soil / Exploitation of Actinobacteria in Environmental Bioremediation / Ex-situ and in-situ Bioremediation of Petroleum Contaminated Sites – An Integrative Approach through Microbial Technology / Microbial Degradation of Keratin and Keratinases / Rhizoremediation Mediated by Plant Growth Promoting Rhizobacteria (PGPR) / Cyanobacteria—An Agent of Heavy Metal Removal / Unravelling the Potentiality of Microbial Inoculants in Phytonematode Management / Microbial Bioremediation of Azo Textile Dye / Ecofriendly and Economically Viable Integrated Nutrient Management for Sustainable Agriculture / Index

Audience – Teachers, researchers and students. Environment, Microbiology, Industrial Engineering, Biotechnology, Botany, Agricultural Sciences and Business and Economics.

Bioremediation: Current Research and Applications



Ashok K. Rathoure

ISBN: 978-93-85909-60-3/Year 2017
Size 16 cm × 24 cm/Pages 476
Hardback/₹ 4095.00

Bioremediation is one of the most promising technological approaches to the problem of hazardous waste, which relies on micro-organisms such as bacteria or fungi to transform hazardous chemicals into less toxic or nontoxic substances. Such biological transformation is more attractive than direct chemical or physical treatment. Microorganisms directly degrade contaminants rather than merely transferring them from one medium to another, employ metabolic degradation pathways and can be used in situ to minimize disturbance of the cleanup site. Hence, microorganisms can be effective, economical and non-disruptive tools for eliminating hazardous chemicals. There is no doubt that bioremediation is in the process of paving a way to greater pastures. The book aims to provide relevant theoretical and practical frameworks and the latest empirical research findings in this area, along with case studies. It is written for students, academicians and industry professionals who want to improve their understanding of the strategic role of bioremediation at different levels of the bioremediation research and knowledge, that is, heavy metal pollution, toxicity, remediation methods and strategies to manage the waste in industries, which are a global concern.

Salient Features:

- The book contains 19 chapters, presented under 4 themes Bioremediation of Inorganic Contaminants
- Bioremediation of Organic Contaminants
- Bioremediation of Textile and Tannery Effluents
- Environmental Sustainability.
- It presents the most recent theoretical and practical information on the use of various bioremediation techniques for the removal of many of the world's most serious and common environmental contaminants.
- The case studies presented in the book will enhance the understanding of real-world applications of bioremediation..

Contents:

PART A: Bioremediation of Inorganic Contaminants

Bioremediation Overview and Case Studies/Heavy Metal Pollution and Its Eco-friendly Management/Bioremediation of Heavy Metals from Industrial Effluents using Cyanobacterial Strains/Microbial Remediation of Cyanides/Arsenic Contamination in Water and Its Management/Role of Heavy Metal Binding Polypeptides in Phytoremediation/Case Studies in Phytoremediation

PART B: Bioremediation of Organic Contaminants

Eradication of Pollution using Marine Microbes/Biosorption of Dyes: An Implication of Microbial Exopolysaccharides/Case Studies in Biosorption/Current Modifications Introduced for Improving Bioremediation Efficiency of Polycyclic Aromatic Hydrocarbons/ Bioavailability Aspects of Hydrophobic Organic Pollutants with Respect to the Potential for Biodegradation/Genetically Modified Microbes for Bioremediation of Oil Spills in Marine Environment/ Potential of Edible Fungal Mycelia, Individually and in Consortium Form for Bioremediation/Oil Spill Cleanup by Textiles

PART C: Bioremediation of Textile and Tannery Effluents

Textile Biological Decolourization and Effluent Remediation Techniques/Bioremediation of Textile Effluents

PART D: Environmental Sustainability

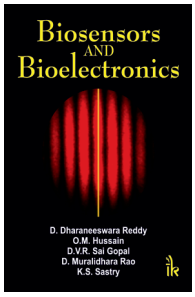
Bioremediation of Polluted Waters using by Water Hyacinth/Air Pollution Tolerance Index (APTI) – An Important Determinant for the Development of Green Space in and Around Industrial/Urban Areas

Audience – Researchers, PG students and academicians in the field of environmental and studies. Industry professionals who want to improve their understanding for bioremediation at different levels.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400 info@ikinternational.com

Biosensors and Bioelectronics



D. Dharaneeswara Reddy
O.M. Hussain • D.V.R. Sai Gopal
D. Muralidhara Rao • K.S. Sastry

ISBN: 978-93-82332-19-0/Year 2012
Size 18 cm × 24 cm/Pages 512
Paperback/₹ 595.00

The development of novel nano-biomaterials and composites with unique properties is one of the fundamental driving forces in design and development of biosensors and bioelectronics to enhance the wealth and well-being of the society. The past twenty years of biosensors research has a significant impact in science and technology. The emerging field of bioelectronics makes use of biology in conjunction with electronics in a wider context.

Bioelectronics embodies the exploitation of biological or biologically inspired molecules as an integral part of an electronic device and the biosensors are the analytical embodiment of this art. The integration of electronics and development of packaging technologies make it possible to manufacture sensors and electronics on a silicon chip no bigger than a pin head. A key aspect is the interface between biological materials and micro- and nanoelectronics.

The book divided in 18 chapters covers:

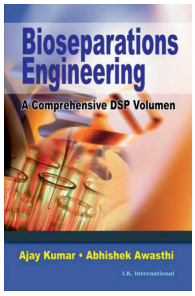
• Biosensors – History and Overview • Components and Performance factors • Biorecognition and Immobilization • Biosensor Technology and Fabrication • Transducers • Biosensors types and Applications in Clinical, Medical and Healthcare, Food Industry, Agriculture and Environmental Monitoring • Molecular Electronics • Photonic Computers and Carbon Chemistry.

This book also extends information on piezoelectric transducers, electromagnetic acoustic transducers (EMAT), molecular electronic seismometers (MES) and conductometric transducers.

Through its broad coverage, it can also be used for undergraduate courses or specialized graduate courses (B.Tech Biotech) on advanced topics.

Audience – B. Tech Biotechnology.

Bioseparations Engineering
A Comprehensive DSP Volumen



Ajay Kumar • Abhishek Awasthi

ISBN: 978-93-80026-08-4/Year 2009
Size 18 cm × 24 cm/Pages 224
Paperback/₹ 345.00

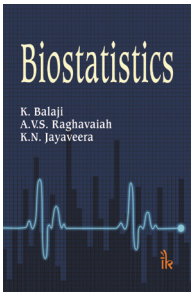
Biosparation Engineering is meant for undergraduate and the postgraduate student comunity pursuing careers in Life Sciences. It concentrates on the more recent methods and techniques for separating components and products of the biotechnology industry. Each chapter deals with a specific type or area of application and includes information on the basic principles, industrial equipment available, commercial applications and an overview of current research and development. Main objective of the book is to provide in-depth knowledge of the subject in an interesting and paramount simple way.

Contents:

Bioseparation Engineering: An Overview/Cell Disruption/ Filtration/ Centrifugation/Product Isolation/Precipitation/Chromatography/ Electrophoresis/ Membrane Separations/Drying/Crystallization/ Finished Good Formulation and Packaging/Index.

Audience – Undergraduate and Postgraduate students of Biotechnology, Genomics and related sciences.

Biostatistics



K. Balaji • A.V.S. Raghavaiah
K.N. Jayaveera

ISBN: 978-93-81141-50-2/Year 2012
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 415.00

Biostatistics is meant for the students of Biostatistics, Biotechnology, Biology, Pharmacy, Medicine, Nursing, B.Com and all Life Sciences courses.

This book includes basic concepts of Biostatistics and deals with the Measures of Central Tendency, Dispersion, Distributions, Correlation, Regression, Testing of Hypothesis, Testing of Significance, Analysis of Variance, Design of Experiments, Statistical Quality Control and Non-Parametric Tests. Each chapter contains worked examples to support the theory part.

Contents:

Introduction/Statistical Investigation/Frequency Distribution/ Diagramatic Representation of Data/Graphical Representation of Data/Measures of Central Tendency/Measures of Dispersion/ Correlation Analysis/Regression Analysis/Theory of Probability/ Distributions/Testing of Hypothesis/Testing of Significance/ Analysis of Variance/Design of Experiment/Statistical Quality Control/Non-Parametric Test/Statistical Tables/Index

Audience – M.Sc., B.Sc., B.A., M.C.A., M.Pharma, B.Pharma and B.Tech.

Biotechnological Applications of Microbes



Editors

Ajit Varma • Gopi K. Podila

ISBN: 978-81-88237-31-9/Year 2005
Size 16 cm × 25 cm/Pages 364
Hardback/₹ 1995.00

The present book focuses on diverse areas of microbial research and provides a wealth of information on the microbial world: biochemistry of the molecules, their functions, syntheses, and regulation activity; microbial genetics, immunology, biotechnology, control of microbial growth, interactions between humans, insects and microorganisms and public health, microbial ecology, terrestrial microbiology, microbiology of waste treatment and so on.

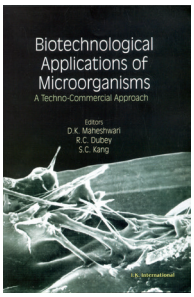
Contents:

Biotechnology: An Overview/Microbial Community Structure and Function in the Rhizosphere/Glomalin: A Novel Proteinaceous Substance Produced by Arbuscular Mycorrhizal Fungi/Microbes: Turning Them into Allies/Plant Microbe Interaction: Molecular Basis/Phosphatase(s) from Microorganisms/Symbiotic Properties in Dual Inoculation of Rhizobia and AM Fungi for Enhancement of Pulse Production in North East Himalayan Region/Fungi in the Root Cortex of Direct-Seeded Wheat Fields with Chiseling or No/ Tillage/Siderophores: Their Biotechnological Applications/Microbial Production of Polyunsaturated Fatty Acids/Engineering of Xylanolytic Organisms and Enzymes for Pulp and Paper Industries/Microbial Bioremediation of Persistent Chlorinated Aromatic Compounds in the Environment/Biotechnological Applications of White-Rot Fungi in Biodegradation of Various Pollutants/Bacteriocins from Lactic Acid Bacteria and Their Industrial Applications/Molecular Approaches to Study the Microbial Community Structure and Function in the Rhizosphere/Index.

Audience – Postgraduate and Research students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineer-ing, Bioinformatics and Biotechnology.

Biotechnological Applications of Microorganisms

A Techno-Commercial Approach



Editors

D.K. Maheshwari • S.C. Kang
R.C. Dubey

ISBN: 978-81-88237-97-5/Year 2006
Size 18 cm × 25 cm/Pages 416
Hardback/₹ 1995.00

A large number of microbes have been exploited commercially in multifarious areas such as production of industrially viable products, organic chemicals, pharmaceuticals, recovery of metals, improvement and maintenance of environmental quality, and pest control. The book embodies twenty review articles contributed by the subject experts from India, Japan and South Korea.The articles fall under the three categories; agriculture microbiology, industrial microbiology, and bioremediation. The Psychrophiles hold many biological secrets such as biochemical limits to macromolecular stability and the blueprints for constructing stable macromolecules. Lactic acid bacteria known for their role in fermentation, economics, and systematics have been dealt with in great detail. Biotechnological applications of pectinases in general and alkaline pectinases in particular play a significant role in industries. Production, characteristics and applications of microbial alkaline pectinolytic enzymes have been elaborated. Nowadays, semi-synthetic ergot alkaloids are widely used as a potential therapeutic agent. Microbial production of glucans, functional organization and their industrial significance have been systematically reviewed. Bioactive exopolysaccharides production from mushrooms have gained importance in recent years. Production and characterization of exopolysaccharides and conversion of unsaturated fatty acids into value-added hydroxyl fatty acids by using microorganisms is being done in a wide range of industrial products. Enhancing the microbial production of 1,3-propanidial and its application highlights the commercial exploitation of potential microorganisms. Aldehyde and organic acid production by using oxydases and their derivatives have been advantageous for industries. Some chapters are devoted to the potential entomo-pathogenic fungi for management of pests, biotechnological applications of fusaria, microbial metabolite-mediated biocontrol of soil-borne plant pathogens, bioremediation of heavy metals, organochlorine and organophosphate pesticides. Although bio-inoculants are eco-friendly and are being used too but reviewers have emphasized the constraints in commercial bio-inoculant production and their quality assurance.

Contents:

Constraints in commercial bio-inoculant production and their quality assurance/Psychrophiles: Lactic Acid: A Potential Microbial Metabolite/Production, Characteristics and Biotechnological Applications of Alkaline Pectinases/Properties, Uses and Directed Evolution of Glucansucrases Elaborated by Various Leuconostoc mesenteroides/Biotechnological Relevance of Ergot Alkaloids with/Future Perspectives/Production and Characterization of Exopolysaccharides in Submerged Culture of Different Species of Phellinus/Production of Value-added Hydroxy Fatty Acids by a Bacterial Strain Pseudomonas Aeruginosa PR3/ Bioactive Potential of Actinomycetes from India and Saudi Arabia/Potential entomopathogenic Fungi for Management of Insect Pests/ Biotechnological Applications of Fusaria/Microbial Production and Applications of 1,3-propanodial/Biochemical Methods for Production of Aldehydes and Organic Acids/Genetic Manipulation in Sustainable Crop Production/Characterisation of Streptomyces Causing Potato Scab Disease in Korea/Secondary Metabolite Mediated Antagonism against Soil borne Pathogens/Biocatalysis and Biodegradation in the Context of Functional Genomics/ Bioremediation of Agrochemicals and Heavy Metals in Soil/ Application of Microorganisms for Bioremediation of Organochlorine and Organophosphate Pesticides/ Fungal biosorbents: A Benign Alternative for Removal and Recovery of Heavy Metals from Wastewater/Biological and Antimicrobial Properties of Coffee/Index.

Audience – Postgraduate and Research Students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bio-engineering, Bioinformatics and Biotechnology.

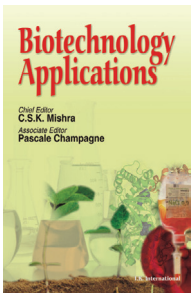
Biotechnology Applications

Chief Editor

C.S.K. Mishra

Associate Editor

Pascale Champagne



ISBN: 978-93-80026-29-9/Year 2009
Size 18 cm × 24 cm/Pages 384
Hardback/₹ 1495.00

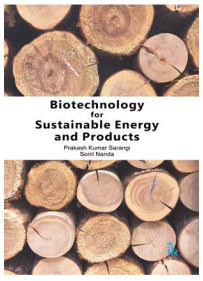
The book is an excellent compilation of chapters on fruitful applications of Biotechnology. The chapters have been authored by eminent scholars from India and abroad working on diverse disciplines related to Biotechnology. The book is an invaluable source of information on biosensors, microbial surfactants, enzyme immobilization, disease diagnosis, probiotics, protein biotechnology, bioleaching, photonic applications and other biotechnology applications. The book will be very useful for Undergraduate and Post graduate students, research scholarsand faculties in biotechnology, microbiology medical sciences and life sciences.

Contents:

Applications of Amperometric Lactate Biosensors/Vaccine Biotechnology/Microbial Surfactants: Commercial, Healthcare and Therapeutic Applications/Immobilisation of Enzymes and Biotechnological Perspectives/Application of Pectinases in Apple Juice Clarification/Fungal Laccase: A Biotechnologically Potential Enzyme/Gastric Ulcer Model in Animals: A Technique for Studying Novel Biomarkers/Liposomal Falvonoid in Combating Age-Related Cerebral Oxidative Damage/Cancer Diagnosis and Treatment/ Sickle Cell Disorders: Biotechnological Approach for Prevention and Cure/Probiotics : Biotechnology in Prolongation of Life/ Protein Biotechnology and Its Applications/The Red Goldmine: Promises of Biotechnological Riches/Immunology of Organ Transplantation: Recent Advances in Molecular and Therapeutic Aspects/Extremophiles as Novel Cell Factories/Endophytes : A Biotechnological Goldmine/ Metal and Mineral Recovery through Bioleaching/Biotechnology Applications for Sustainable Aquaculture/Soil Bioremediation/ Photonic Solutions for Biotechnology/Index.

Audience – Postgraduate and Research Students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology.

Biotechnology for Sustainable Energy and Products



Prakash Kumar Sarangi
Sonil Nanda

ISBN: 978-93-86768-63-6/Year 2019
Size: 16 cm × 24 cm/Pages 336
Hardback/₹ 1995.00

The apprehensions relating to global warming, climate change and increasing energy demands have led to significant research for the development of sustainable energy and products from biomass by utilizing modern biotechnological tools. This book is an innovative collection of 14 chapters broadly focussing on biofuels, biomaterials, biopolymers and other industrially relevant commodities produced from agricultural biomass, forest residues, algae, food processing wastes and other biogenic refuse.

The book aims to serve as a reference book for academic and industrial researchers in finding new pathways to link food security and energy demands with the help of novel biotechnological interventions. This book highlights state-of-the-art aspects based on biotechnology involved in transportation sector, food industry, agriculture, biorefining and material science.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Contents:

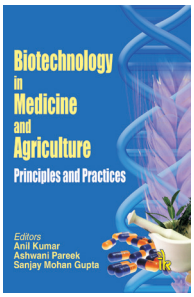
Sustainable Production of Algal Biomass for Bioenergy: Role of System Level Approaches and Synthetic Biology Tools/Cellulases: The Biomass Transformers to Biofuel Precursors/Aspects of Solid-State Anaerobic Digestion for Biomethane Production/Role of Nanobiotechnology in Bioenergy Production/Sustainable Energy from Agricultural Waste Materials and Residues via Microbial System/ Potential of Thermophilic Enzymes for Bioethanol Production/ Biotechnology for Production of Fermented Soybean in North Eastern Hill Region of India/Bio-prospects of Algae as Food Source Supplements/Intervention of Biotechnology in Dairy Processing/ Lignin-based Biocomposites and Biomaterials: A Review on Industrial Applications/Recent Trends in Microbial Biopolymer Technology Research and Development/Bioconversion of Agro-Wastes into Phenolic Flavour Compounds/Biotechnological Interventions to Utilize Microbial Resources for Sustainable Agriculture/Techno-Economic Analysis of Biodiesel Production for Modern Diesel Engines/Index

Audience – UG & PG students of Biotechnology/Environmental Science

Biotechnology in Medicine and Agriculture Principles and Practice

Editors

Anil Kumar • Ashwani Pareek
Sanjay Mohan Gupta



ISBN: 978-93-81141-40-3/Year 2013
Size 18 cm × 24 cm/Pages 1008
Paperback/₹ 895.00

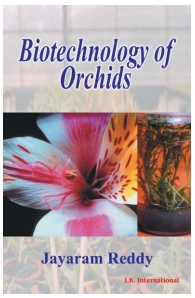
This book would enable the students to develop interest and appreciate the role of biotechnology for future research and advancement of agriculture, veterinary, biomedical, industrial development and environmental protection for the welfare of society. The aim of this book is not only to bring together the various fields of biotechnology, but also to present the basics behind each potential biotechnology in an understandable form. The book also attempts to compile some of the biotechnology processes for their easy access at a single platform which at present, is lacking. The target of the book is to give students a complete view of 'know-how' of biotechnology, especially those who have just ventured into this field and need a head start. Diverse biotechnologies with their basic principles along with there potential applications emerging in recent past are explained in very easy language and with the help of illustrations.

Contents:

Biotechnology: An Introduction/**Section A: Biotechnology for Wider Applications —** Recombinant DNA Technology/Nucleic Acid Probes Technology/Polymerase Chain Reaction Technology/DNA-Protein Interaction Technology/Genomics Technology/Proteomics Technology/Signalomics Technology/Metabolomics Technology/ Bioinformatics and *In Silico* Technology/System Biology Technology/ Microarray Technology/Anti-Sense Technology/RNA Interference Technology/Hybridoma Technology/Molecular Diagnostics Technology/Biosensor Technology/Nano-Biotechnology/**Section B: Biotechnology for Crop Applications —** Molecular Marker Technology in Plants/Marker Assisted Selection Technology/Plant Transgenic Technology/Bioinoculant Technology/**Section C: Biotechnolgy for Health Applications —** Molecular Marker Technology in Animal/Embryo Tranfer Technology/Stem Cell Technology/Animal Transgenic Technology/Liposome Technology/ Vaccine Technolgy/Synthetic Biologicals Technology/**Section D: Biotechnology for Indutrial Applications —** Immobilized Biocatalyst Technology/Bioprocess Technology/**Section E: Biotechnology for Environmental Applications —** Metagenomics Technology/ Bioremediation Technology/Index

Audience – Undergraduate and postgraduate Molecular Biology and Biotechnology and Agriculture.

Biotechnology of Orchids



Jayaram Reddy

ISBN: 978-81-88237-67-8/Year 2008
Size 18 cm × 24.5 cm/Pages 368
Hardback/₹ 1995.00

Biotechnology of Orchids attempts to assimilate all the necessary information regarding orchids and plant biotechnology. About 650 research papers and books have been referred to and cited in the book and the protocols developed for more than 260 orchid cultivars are reviewed. History, uniqueness, habit, habitat, orchid seeds and their germination, distribution, evolutionary status, hybridization, registration of hybrids, taxonomy, methods of cultivation and orchid-mycorrhizal association are discussed to the extent necessary for a scientist. The status of world floriculture industry and India's position is also explained.

The next focus of the book is on plant biotechnology. History, prospects, potential and techniques are discussed in detail. Since the present trend in plant biotechnology is to produce genetically modified plants by transgenesis, importance has been given to the techniques related to this process. Methods of transgenesis, transgenic crops, and the related controversies are treated in separate chapters. Different methods by which foreign genes can be introduced into an organism are described with specific examples. These techniques are discussed for plant systems in general and also for orchids in particular. Protoplast isolation, fusion and culture techniques are also reviewed for plants in general and orchids with specific examples. A chapter dedicated to cytological techniques has also been introduced, which also includes the methods for the preparation of different types of stains used in cytology. Tissue culture technique forms the backbone of biotechnology and hence various steps of the technique are described in detail for orchids which of course is not much different for other plants. The last section carries protocols for the micropropagation of four different orchid hybrids and also includes original results obtained during morphogenetic studies carried out by the author.

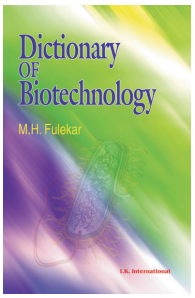
The book will meet the needs of students, researchers, trainees, professional scientists, and research scholars as well as the orchid overs and floriculturists.

Contents:

Introduction/Orchids and Floriculture/Mycorrhizal Association in Orchids/Introduction to Biotechnology/Genetically Engineered and Modified Plants/Transgenesis/Application of Biotechnology in Horticulture/Cell and Protoplast Culture and Somatic Hybridization/ Biotransformation of Orchids/Protoplast Isolation, Fusion and Culture in Orchids/Cytological Techniques/Micropropagation of Orchids/Protocols for the *In Vitro* Propagation of Some Orchid Hybrids/Tables/Endangered Orchids of Western Ghats/References/ Index.

Audience – Students and Researchers in Biotechnology and Floriculture.

Dictionary of Biotechnology



M.H. Fulekar

ISBN: 978-81-907462-9-8/Year 2009
Size 18 cm × 24 cm/Pages 200
Paperback/₹ 215.00

The terminologies involved in the area of biotechnology are quite recent and the students and teachers of science, engineering and also research scholars need to know the terms of biotechnology and their meanings to adopt them in their learning and teaching process as well as research work. As there is no compilation of terms related to biotechnology so far, it was felt imperative to have one. It will serve as a ready reference

for the graduate and post-graduate level students of biotechnological science and engineering as also the research students and teachers. The present dictionary will cover the areas of:

• Molecular Biology • Microbiology • Genetic Engineering • Biochemistry • Environmental Biotechnology • Plant and Animal Biotechnology.

Audience – Biotechnology and related areas.

Emerging Trends in Biomedical Sciences and Health

Editors

D.V. Rai • R.C. Sobti • Raj Bahadur



ISBN: 978-93-80026-22-0/Year 2009
Size 18 cm × 24 cm/Pages 272
Hardback/₹ 995.00

The present book is designed to make the reader familiar with the basic aspects that affect human health. It also covers the basic and applied aspects in the field. It also includes various aspects on the application of biomedical sciences and potential risks and benefits in terms of growing knowledge in the field of biomedical sciences and technology, stem cell in biomedicine, microorganisms and health, bioaerosols and bioengineered food. Moreover, it highlights on promoting the healthy technology for future safeguard to human life.

Contents:

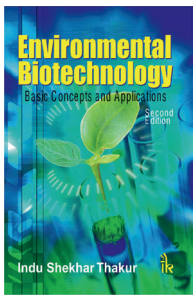
Oxidative Stress in Health and Diseases/Biological Rhythms in Pharmacology and Toxicology/Bone Physiology in Health and Disease/Cancer : Carcinogen Biotransformation and Chemoprevention/Epilepsy: Herbal Remedies/Immunotoxicology and Health/Stem Cells : New Perspectives in Biomedicine/ Microbes and Human Health/Shilajit : Health Rejuvinant/ Vitamins and Vitamins and Minerals: Health Prospects/ Genetically Engineered Foods and Health/Bioaerosol: Impact on Human Health/Energy Sources: Health Effects/Medical Geology/ Biomedical Geography: Disabled Population/Index.

Audience – Graduate and post-graduate students of biomedical sciences, environmental biotechnology, medical physics, B.E. and B.Tech. (Biomedical Engg.).

Environmental Biotechnology
Basic Concepts and Applications

Second Edition

Indu Shekhar Thakur



ISBN 978-93-80578-47-7/Year 2011
Size 18 cm × 24 cm/Pages 536
Paperback/₹ 525.00

The field of Environmental Sciences has acquired new dimensions in the last fifty years, due to the changing scenario of population explosion, agricultural activities for food production, rapid industrial development for commercial and household commodities and so on. The upsurge in all these activities has contributed in one way or the other to environmental problems at the local, regional and global levels. Economic growth and the continuing heavy consumption of natural resources and energy are responsible for global environmental crisis like global warming, acid rain and the destruction of the ozone layer.

Environmental biotechnology is a vast and rapidly growing field, which continues to revolutionise the understanding of basic life sustaining processes in the environment, by identifying and exploiting the biomolecules and their, utilities to provide clean technologies, in order to counter environmental problems.

Contents:

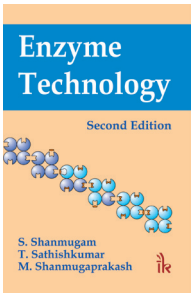
Introduction/Environment and Ecosystem Processes/Environmental Resources: Air, Water and Soil/Environmental Perturbation: Air, Water and Soil Pollution/Global Environmental Problems: Atmosphere and Environmental Issues/Structural and Functional Dynamics of Microbial Life/Air Pollution/Water Pollution/Solid Waste and Soil Pollution Management/Degradation of Lignocellulose Compounds/ Degradation of Xenobiotic Compounds/Bioabsorption of Metals/ Bioremediation/Biofertilizers and Biopesticides/Composting/Bio-Polymers and Bio-Plastics/Bioleaching/Biomethanation/Biofuel and Biodiesel/Pulp and Paper Industry/Tanning Industry/Distilling Industry/Dye Industry/Antibiotic Industry/Petroleum Industry/ Dairy Industry.

Audience – Students and Researchers in Environmental Biotechnology, Biotechnology.

Enzyme Technology

Second Edition

S. Shanmugam • T. Sathishkumar
M. Shanmugaprakash



ISBN: 978-93-81141-59-5/Year 2012
Size 16 cm × 24 cm/Pages 248
Paperback/₹ 345.00

What are enzymes? How do they behave? How are they obtained? What are their uses? This book manages to cover all this .... most of the young workers in R&D of biotechnological industries would find it useful for a quick introduction.

— Current Science, Vol. 96, No. 11, 2009.

This book gives a broad account of enzymology and aims to put the current knowledge into perspective. The chapters follow a progression from the properties of isolated enzymes to the behaviour of enzymes in increasingly complex systems, leading up to the cell. Included is the discussion on the importance of enzymes in medicine and industry.

This book discusses the behaviour of isolated enzymes, dealing in turn with isolation methods, structural characterization, kinetics, catalytic action and control of activity, immobilization methods and various applications of enzymes. The methods for isolation and characterization of enzymes are now well-established procedures, so the rate at which three-dimensional structures and mechanisms are being determined is increasing dramatically. Ultimately it is necessary to know the behaviour of enzymes in living cells. This involves in part a synthesis of the information obtained from the study of isolated enzymes, but it also requires detailed knowledge of the molecular morphology of the cell, which in turn requires methods for making measurements on intact cells.

The study and applications of enzymes have assumed increasing importance both in medicine and in industry and a discussion of these aspects is therefore given prime importance.

This book will be of immense use to all the UG and PG students of Biotechnology engineering and science students and also to other the sciences students and research scholars.

Contents:

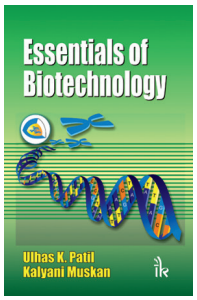
Introduction/Enzyme Classification/Enzyme Extraction and Isolation/ Purification of Enzymes/Enzyme Kinetics/Enzyme Immobilization / Enzyme Applications/Enzyme Biosensors/Index

Audience – UG and PG students of Biotechnology Engineering and Science students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Essentials of Biotechnology



Ulhas K. Patil • Kalyani Muskan

ISBN: 978-93-80026-52-7/Year 2009
Size 16 cm × 24 cm/Pages 416
Paperback/₹ 495.00

Essentials of Biotechnology is meant for undergraduate biotechnology and life sciences students. The book discues the basics of interdisciplinary subjects which is required for developing the conceptual understanding in biotechnology and to acquire research attitude. It elaborates fundamental concepts which are absolutely necessary for budding biotechnologist. It is an attempt to cover broad spectrum of biological dimensions with biotechnological exploration.

Section I elaborates theoretical aspects of basic biology, biochemistry, microbiology, molecular biology with correlation to modern applied aspects.

Section II is grounded in the experimental approach. Each experiment is described with sufficient details. The figures and tables provided with experiments will be helpful to the students and instructors for better understanding of the scientific principles and skillful execution of experiments.

Contents:

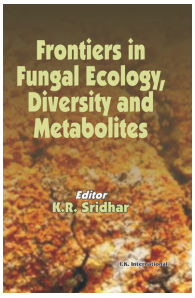
UNIT

Introduction to Biotechnology/Cytology/Growth/Nutrition/Carbohydrates/Lipids/Amino Acids and Proteins/Nucleic Acids / Vitamins/Enzyme/Hormones and Phytohormones/Biophysical Chemistry/Microscopy/Staining/Cell Measurements/Isolation and Cultivation Techniques/Sterilization and Disinfection/Methods in Microbial Taxonomy.

EXPERIMENTS

Audience – Undergraduate Biotechnology and Life Sciences' students.

Frontiers in Fungal Ecology, Diversity and Metabolites



Editor

K.R. Sridhar

ISBN: 978-81-89866-91-4/Year 2009
Size 16 cm × 24 cm/Pages 352
Hardback/₹ 1195.00

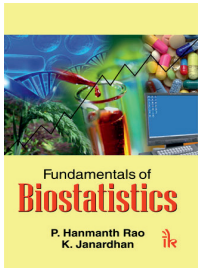
Mycology is a frontier area of research in life sciences. Fungi represent one of the three major evolutionary segments along with plants and animals. Fungal multidimensional features with basic and applied value projected their potential beyond routine systematics, diversity and environmental studies. In view of tremendous developments in the field of Mycology, the present treatise emphasizes various aspects of contemporary issues in mycology. It comprises 22 chapters with emphasis on the fungal ecology, diversity and metabolites. The topics treated include aquatic ecology, diversity and phylogeny, mutualism and interactions, potential metabolites, pathology and toxins, fungal Infections and prevention, cell permeabilization and advances in monocarboxylate transporters in yeasts with an emphasis on cancer therapy. This volume is of special interest to mycologists as a valuable source of information on the frontier areas of mycology dealing with diversity, ecological amplitudes, methods of assessment, novel metabolites and bioprospecting avenues.

Contents:

Freshwater Hyphomycetes/Diversity of Aquatic Hyphomycetes of the Western Ghat Rivers/Mangrove Fungi of the Indian Peninsula/Marine Fungi and Novel Metabolites/Trichomycetes/Forest Pathology in India/Diversity and Adaptive Response of Lichens in Antarctica/Diversity of Arbuscular Mycorrhizal Fungi of Endemic Myristicaceae/Arbuscular Mycorrhizal Fungi of the 'Khazan Land' Agro-Ecosystem/Arbuscular Mycorrhizal Fungi and Salinity Stress in Crop Plants/Production of Indole Acetic Acid by Ectomycorrhizal Fungi/Endophytic Fungi : Mutualism, Bioactive Metabolites and Bioprospecting/Identity and Toxigenic Potentiality of *Fusarium* spp. Colonizing *Sorghum*/Fumonisins – A New Class of Fusarial Mycotoxins/Improvement of Coffee Quality through Prevention of Moulds/Fungal Infections in Humans/Plasma Membrane Transport of Monocarboxylates in Yeasts/Cell Permeabilization–An Approach to Increase the Biocatalysis in Yeasts/Molecular Approaches in Mycology Based on Polymerase Chain Reaction/Phylogenetic Tools for the Identification of Fungi/Bioactive Peptaibol Antibiotics from *Trichoderma*/Emerging Issues in Mycology/Index.

Audience – Postgraduate and Research students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology.

Fundamentals of Biostatistics



P. Hanmanth Rao • K. Janardhan

ISBN: 978-93-80578-71-2/Year 2011
Size 16 cm × 25 cm/Pages 292
Paperback/₹ 385.00

Biological inquiry needs knowledge of statistical techniques, mathematical competence and support of computer programmes. This text book has been written in a simple and easy to understand language and presents a broad collection of data analysis techniques.

Important features of the book include:

1. Worked out examples
2. Exercise at the end of each chapter
3. University question
4. A Chapter on Mathematics.

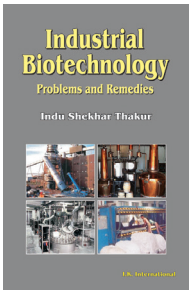
The text book serves the need of different Biology courses, Agricultural sciences, Medicine, Pharmacy, Biotechnology, Genetics, Home science and Nutrition.

Contents:

Mathematics/Frequency Distribution—Measures of Central Values and Dispersion/Probability/Probability Distribution/Concept of Sampling and Tests of Hypotheses/*t*-distribution/Chi-Square Distribution/Linear Regression and Correlation/Analysis of Variance (ANOVA)/Annexure/Index.

Audience – Undergraduate students of Biology, Agricultural science, Medicine, Pharmacy, Biotechnology, Genetics, Home Science and Nutrition.

Industrial Biotechnology
Problems and Remedies



Indu Shekhar Thakur

ISBN: 978-81-88237-53-1/Year 2006
Size 16 cm × 24 cm/Pages 332
Paperback/₹ 425.00

The aim of this book is to determine the processes and utilization of raw materials in the industries, formation and release of pollutants (air, water and soil) in the environment, effect and impact of the pollutants on biotic and abiotic components of the environment and finally identifying the physical, chemical, biological and alternating methods for treatment of pollutants in the industrial effluents. Efforts have also been made to identify the methods for bioconversion and recovery of products from the effluents by biotechnological methods.

The book covers postgraduate syllabus of Environmental Biotechnology. It will also be helpful for advance undergraduates opting for

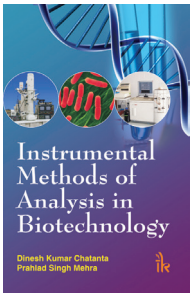
Environmental Biotechnology course as part of an environmental science or bioscience programme, and postgraduate students pursuing a biotechnology-related biodegradation and waste treatment course.

Contents:

Pulp and Paper Industry/Distillery Industry/Leather Tanning Industry/Petroleum Industry/Food and Beverages Industry/Pesticides Industry/Dye and Intermediates Industry/Pharmaceutical Industry/Heavy Metals Industry/Index.

Audience – Students and Researchers in Environmental and Industrial Biotechnology.

Instrumental Methods of Analysis in Biotechnology



Dinesh Kumar Chatanta
Prahlad Singh Mehra

ISBN: 978-93-81141-38-0/Year 2012
Size 16 cm × 24 cm/Pages 240
Paperback/₹ 345.00

Instrumental Methods of Analysis in Biotechnology is an attempt to give an overview of instrumentation and techniques used in biotechnology and other related fields of biological sciences.

Salient Features:

- Covers the various types of microscopes, centrifugation techniques used in separation of biomolecules, chromatographic techniques used in separation of biological molecules with special reference to HPLC and GC techniques
- Covers the techniques used for purification of nucleic acids, PCR techniques and various electrophoretic techniques.
- Focuses on various spectrophotometric techniques used in biochemical analysis and Mass spectroscopy.
- Covers the principles and applications of Raman, Infra-red spectroscopy, NMR, ESR and Magnetic Resonance Imaging (MRI).
- Includes Radioisotopic techniques such as GM and scintillation counters and RIA, ELISA.

This book also discusses the various approaches used in determination of microbial growth with emphasis on FACS and Coulter counter techniques.

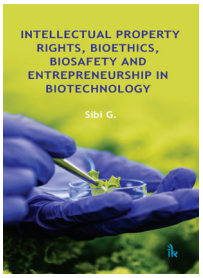
This book serves as a valuable source of information for students, teachers and researchers pursuing biotechnology and other biological sciences.

Contents:

Microscopy/Centrifugation/Chromatography/Isolation and Purification of Nucleic Acids/Electrophoresis/Polymerase Chain Reaction (PCR)/Spectrophotometry/Mass Spectrometry/X-Ray Diffraction/Radioisotope Techniques/Determination of Microbial Growth/References/Index.

Audience – Undergraduate and postgraduate Biotechnology, Pharmacy and Life Sciences students.

Intellectual Property Rights, Bioethics, Biosafety and Entrepreneurship in Biotechnology



Sibi G.

ISBN: 978-93-86768-74-2/Year 2020
Size: 16 × 24 cm/Pages 504
Paperback/₹ 645.00

This book is divided in 4 parts. Part-I is devoted to issues of intellectual property rights (IPRs). It is intended as a primer for those who are involved or associated with understanding the needs for improving the integrity of scientific documentation. Part-II addresses the technical aspects of biosafety in research. Part-III is oriented to bioethics. It describes emerging legal, social and policy issues pertaining to biotechnology and intellectual property laws. Part-IV deals with entrepreneurship activities in biotechnology. It also outlines the opportunities in the field of biotechnology, ethical considerations, key issues and practical matters for entrepreneurs in biotechnology.

Salient Features:

- Provides basic and comprehensive knowledge pertaining to intellectual property rights.
- Provides information on intellectual property management concepts and practical implementation to those needing such guidance.
- Provides information on means of controlling and monitoring the release of biohazardous materials.
- Will help the readers to understand the ethical, legal and social issues generated by biotechnology.
- Differentiates between innovation and entrepreneurship in the biotechnology context.

Contents:

PART I: Intellectual Property/Patents/Copyright/Trademarks/Trade Secret/Industrial Designs/Plant Variety Protection/Geographical Indication (GI)/Domain Name/Ownership, Inventorship and Authorship/Knowledge Transfer/Publishing vs Patenting/Traditional Knowledge/International Treaties and Conventions on Intellectual Property/Biotechnology Patents/Transferring Intellectual Properties

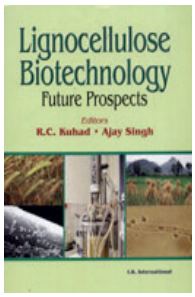
PART II: Biosafety/Bioprocessing/Uncontrolled Release of Materials in Biotechnology Operations/Animal Models/GM Plants/Genetically Modified Organisms/Biosafety Considerations for Large-Scale Production of Microorganisms

PART III: Bioethics/Cloning of Animals/Human Cloning/Human Genome Diversity Project/Stem Cell Research/Xenotransplantation/GM Foods/Issues in Food, Agricultural and Animal /Biotechnology

PART IV: Entrepreneurship in Biotechnology

Audience – BSc (Hons.) Biotechnology & BE/BTech. (Biotechnology)..

Lignocellulose Biotechnology
Future Prospects



Editors

R.C. Kuhad • A. Singh

ISBN: 978-81-88237-58-6/Year 2007
Size 18 cm × 25 cm/Pages 400
Hardback/₹ 1495.00

The residues from agricultural crops and agro- and forest-based industrial processes are abundant and along with grasses and weeds constitute a major part of the biomass available on earth. Biomass in the form of cellulose, hemicellulose and lignin provides a means of collecting and storing energy and hence represents an important energy and material resource. If not utilized judiciously, the unutilized waste can cause environmental pollution. The abundance of agricultural lignocellulose residues from major foods such as grain crops and the forestry sector represents major prospects and has the potential of microbiological conversion to numerous industrial products as mentioned above. This can be achieved through the efficient utilization of all the three fractions of biomass—lignin, cellulose and hemicellulose.

This book contains contributions from leading scientists in the areas of lignocellulose microbiology, enzymology and biotechnology. It should be of use to undergraduate, postgraduate and doctoral students of microbiology, biochemistry, biotechnology, environment science/engineering, food sciences and technology and animal feed sciences.

Sectional Contents:

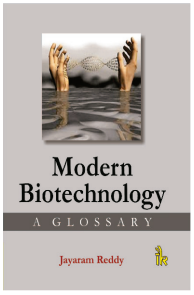
Part I	:	Overview of Lignocellulolytic Biotechnology
Part II	:	Lignocellulolytic Microorganisms and Enzymes
Part III	:	Lignocellulose Bioconversion
Part IV	:	Biotechnological Applications

Audience – Postgraduate and Research Students of Biotechnology and Agricultural Science.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Modern Biotechnology:
A Glossary



Jayaram Reddy

ISBN: 978-93-82332-75-6/Year 2014
Size 16 cm × 24 cm/Pages 240
Hardback/₹ 595.00

This glossary provides a consolidated and comprehensive account of terms and acronyms that are used regularly in biotechnology sensu lato and in the very broad area, now called modern biotechnology, with all the associated problems of usage of originally discrete technical terms in a general context by scientific community that does not often discriminate, or legal context that requires exact definitions. It is an attempt to present a modern list of terms currently in use in biotechnology and related fields. It is intended to provide a convenient reference source for teachers, researchers, students, technicians and even the laymen.

The terms included in the glossary have been selected by inspection of books, dictionaries, journals, the Internet and abstracts dealing entirely or in part with biotechnology and associated fields.

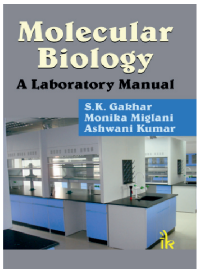
Appendices include the terms and acronyms related to bioinformatics and computational biology.

Contents:

Glossary/Appendices

Audience – Researchers, students, technicians in biotechnology.

Molecular Biology
A Laboratory Manual



S.K. Gakhar • Monika Miglani
Ashwani Kumar

ISBN: 978-93-82332-30-5/Year 2014
Size 16 cm × 24 cm/Pages 128
Paperback/₹ 295.00

The field of molecular biology continues to be the most exciting and dynamic area of science and is predicted to dominate the 21st century. Only at the molecular level, it is possible to understand various biological processes in detail. Such understanding is vital for advances in medicine, and the pharmaceutical industry that produces new drugs and thus cure is greatly dependent upon molecular biology. Molecular biology also contributes to our understanding of what human beings are and how they fit into this universe.

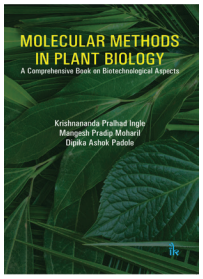
The objective of this manual is to train young teachers from colleges and research institutions so that methodologies could be used by them in their research in various fields of biology. This would also help all the beginners and students at B.Sc. & M.Sc. level to learn the various techniques on molecular biology. This book contains four chapters giving the step-wise protocols for various practicals. In addition, it has general instructions for safety procedures, viz., biosafety, radiation safety, hazardous chemicals, personal protection and also the preparation of various stock and working solutions for molecular biology practicals.

Contents:

Nucleic Acids/Proteins/Bioinformatics/General Laboratory Instructions/Cautions/Appendix/Index

Audience – Student B.Sc. & M.Sc. students of Molecular Biology & Biotechnology.

Molecular Methods in Plant Biology
A Comprehensive Book on Biotechnological Aspects



Krishnananda Pralhad Ingle
Mangesh Pradip Moharil
Dipika Ashok Padole

ISBN: 978-93-86768-81-0/Year 2020
Size: 14 × 22 cm/Pages 104
Paperback/₹ 145.00

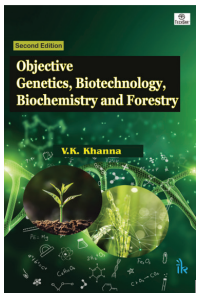
This book integrates the experimental procedures and theoretical principles for undergraduate, postgraduate, academicians and researchers in the area of agriculture and life sciences. The experiments have been updated and extended to reflect developments in the respective fields. In-text worked examples are again used to enhance student's understanding of each topic. The book is designed to provide students with the experience of how scientists use their knowledge to understand real-world science related issues that confront them in their professional lives. Experimental procedures and troubleshooting of data are emphasised throughout the book. The book integrates theory and practices to ensure students understand why and how each technique is used.

Contents:

Isolation of Plant Genomic DNA/Isolation of Plasmid DNA/Polyacrylamide Gel Electrophoresis/Polymerase Chain Reaction (PCR) Amplification/RNA Isolation Using TRIzol Method/Expression Analysis Using Semi-Quantitative Real Time-PCR/Quantitative Expression Analysis by Real Time-PCR/Analysis of DNA Sequences by Southern Blotting and Hybridization/Analysis of DNA Sequences by Northern Blotting and Hybridization/Histochemical GUS Assay/Enzyme-Linked Immunosorbent Assay (ELISA)/DNA Gel Extraction Protocol/Competent Cell Preparation/Ligation, Transformation and Colony PCR/DNA Sequencing and Analysis/Glossary/Instruments Used in the Laboratory/Appendix

Audience – Undergraduate and postgraduate academicians and researchers of Agriculture and Life Sciences

Objective Genetics, Biotechnology, Biochemistry and Forestry
Second Editors



New

V.K. Khanna

ISBN: 978-93-90620-66-1/Year 2023
Size: 18 × 24 cm/Pages 5324
Paperback/₹ 565.00

The second edition of Objective Genetics, Biochemistry and Forestry is an up-to-date version in which many new questions have been added along with those on related topics, such as Natural Selection, Genetics and Evolution, General Genetics, Plant Breeding, Microscopy, Cell Division, Mendelism, DNA Biotechnology, Biochemistry, Forestry, and Tissue Culture, etc.

This book has been designed to assess the candidate's understanding of the subject. It is perhaps for the first time where questions have four to six choice statements, which are to be understood to find the right answer. One has to think and remember what he has learnt to be able to answer the questions.

In most of the competitive examinations such as Agriculture Research Services of Indian Council of Agricultural Research, NET, State Eligibility Test and Civil Services Examination, etc. Objective type questions are asked. Also, the entrance test for admission to many universities are totally objective.

Sectional Contents:

- Divided in 3 sections, the first section includes the multiple-choice questions based on 23 categories, followed by the answers to those questions (second section). The third section includes the appendices.
- Appendices include glossaries on genetics, tissue culture, biotechnology, biochemistry, and forestry. A brief note about Nobel Prize, list of Nobel Laureates, state Agricultural Universities in India, merits and awards given by ICAR, etc.
- Over 3200 questions have been given in the book.

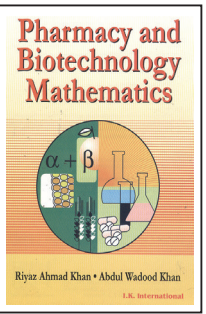
Contents:

General/Natural Selection, Genetics and Evolution/General Genetics/Microscopy/Cell and Cell Structure/Cell Division/Mendelism/Sex Determination and Sex Linkage/Extranuclear Inheritance/Quantitative Genetics/Cytology and Cytogenetics/Linkage and Recombination/Chromosomal Aberrations/Genetics of Bacteria and Bacteriophages/Gene Mutations/Genetic Material (DNA and RNA)/Genetics of Development and Behaviour/Population Genetics/Tissue Culture/DNA Biotechnology/Genetics of Cancer and Immunology/Biochemistry/Forestry

Audience – Candidates appearing for Agriculture Research Services of Indian Council of Agricultural Research, NET, State Eligibility Test and Civil Services Examination

Shelving – Agriculture

Pharmacy and Biotechnology Mathematics



Riyaz Ahmad Khan
Abdul Wadood Khan

ISBN: 978-81-906942-8-5/Year 2008
Size 16 cm × 24 cm/Pages 462
Paperback/₹ 445.00

(See on page 310)

Plant Biotechnology & its Applications in Tissue Culture



Editors

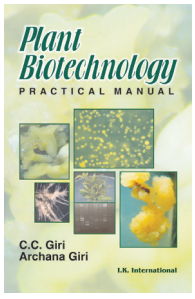
Ashwani Kumar • Shikha Roy

ISBN: 978-81-88237-50-0/Year 2006
Size 18.5 cm × 24 cm/Pages 326
Hardback/₹ 1995.00

(See on page 211)

Plant Biotechnology
Practical Manual

t



C.C. Giri • Archana Giri

ISBN: 978-81-89866-14-3/Year 2006
Size 16 cm × 24 cm/Pages 160
Paperback/₹ 295.00

Plant Biotechnology: Practical Manual covers most of the important areas of present day plant biotechnology, beginning from plant tissue culture media preparation to transgenic plant production and molecular markers. It is meant for both students who are being introduced to plant biotechnology and those wanting to do advance research in this field. It would also be helpful for teachers in formulating their own practical protocols using different model plant systems.

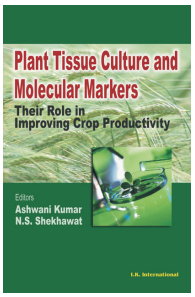
This book includes the principles, theoretical background and the basis for each protocol supported by the authors' own research findings. This approach may help the learners and researchers to modify their procedures to develop their own protocols and methods utilising the proven protocols included in the book.

Contents:

Plant Tissue Culture Basics and Know-How/Plant Regeneration via Organogenesis and Somatic Embryogenesis/Protoplast Isolation, Culture and Somatic Hybridization/Anther Culture and Production of Haploids/Encapsulation Techniques for Synthetic Seeds (Synseeds)/Technique for Embryo Rescue of Wide Cross Hybrids/Cell Suspension Culture and Production of Secondary Metabolites/Induction of Transformed Hairy Roots using Wild Strains of *Agrobacteium rhizogenes* and Production of Secondary Metabolites/Induction of Transformed Shooty Teratomas using Specialized Strains of *Agrobacteium tumefaciens* and Production of Secondary Metabolites/*Agrobacterium* Mediated Genetic Transformation/Anatomical and Histological Techniques for Plant Tissue Cultured *in vitro*/Chromosomal Analysis of *in vitro* Cultured Tissue and Regenerated Plants/Techniques for Developing Molecular Markers – Basics/Prescribed Safety Practices in the Laboratory.

Audience – B.Sc./M.Sc. in Biotechnology, Genetics, Botany, Agriculture, B.Tech./M.Tech. in Biotechnology.

Plant Tissue Culture and Molecular Markers
Their Role in Improving Crop Productivity



Editors

Ashwani Kumar • N.S. Shekhawat

ISBN: 978-81-89866-10-5/Year 2009
Size 18 cm × 25 cm/Pages 714
Hardback/₹ 2495.00

The present book discusses micropropagation studies on several crop plants, molecular basis of understanding various life processes including molecular basis of somatic embryogenesis and other physiological and biochemical processes having significant biotechnology application. It vitro studies of some important plants like *Aloe vera, Simmondsia chinensis, Anacyclus pyrethrum and Crataeva nurvala, Arachis hypogaea* L., *Phoenix dactylifera, Dendrocalamus asper, Asparagus adescendents* Roxb., natural products of plants origin with their therapeutic potential and biotechnological production, genome analysis of crop plants with future applications in biotechnology etc. It is useful for postgraduates and researchers in plant biotechnology and related areas like plant science, biotechnology, bioscience, environmental science, food biosciences and chemistry. It will also be of interest for professionals working in the plant biotechnology industry.

Contents:

Contamination Control and Enhanced Axillary Budding from Mature Explants of *Taxus baccata* ssp. *Wallichiana*/Bioinformatics: an Overview/Intellectual Property Rights in Biotechnology/ *In Vivo* and *In Vitro* Studies on Plant Tumors/Integrated Approaches of Mutagenesis and *In Vitro* Selection for.../Clonal Fidelity in Micropropagated Plants/Tissue Culture of Date Palm (*Phoenix Dactylifera* L.)—A Non-conventional Approach/ Cytological Analysis of Nodal Stem Segment and Callus Regenerated Plantlets of *Azadirachta indica.../* Establishment of an *in vitro* Clonal Propagation Method for Commercial Exploitation from A High Biomass Yielding *Aloe Vera* (L.) Germplasm/Unravelling the Molecular Basis of Somatic Embryogenesis/Doubled Haploids in Crop *Brassicas*: Retrospect and Prospects/A Review of Tissue Culture Studies on Bamboos/ Cloning of Female Plant of *Simmondsia Chinensis* (Link) Schneider Selected for Cultivation in Rajasthan/Comparative Studies on Somatic Embryogenesis and Plant Regeneration from Immature and Mature Zygotic Embryo Axes of Groundnut/*In Vitro* Studies and Micropropagation of *Anacyclus pyrethrum* and *Crataeva nurvala*/Micropropagation and Large-Scale Plant Regeneration of Edible

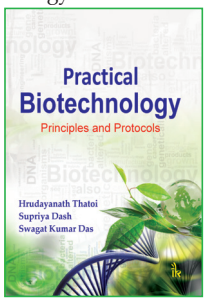
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Bamboo *Dendrocalamus asper* through Somatic Embryogenesis/ Natural Products of Plant Origin with Therapeutic Potentiality and their Biotechnological Production/ Micropropagation of Medicinal Plants of Indian Desert and Aravallies/Morphological and Biochemical Changes in *in vitro* Raised *Arachis Hypogaea* Var RG-141.../Morphogenesis in Cultured Tissues of Three Grass Species/*In Vitro* Propagation of *Vigna sp*/Biology and Biotechnology of Groundnut (*Arachis hypogaea* L.) — A Review/Propagation of *Chlorophytum Borivilianum* San. and Fern.—A Review/Recent Advances in Micropropagation of *Chlorophytum Borivilianum* Sant. & Fern./Enhancement of Secondary Metabolites by Elicitation and Metabolic Engineering/High Frequency Plant Regeneration for *Saccharum Munja* — A Useful Plant of Arid Area/Biology and Biotechnology of *Lasiurus Sindicus* (Shewan): A Valuable Grass of Thar Desert/Liquid Culture System Stimulates *In Vitro* Growth and Shoot Multiplication in Some Medicinally Important Plant Species in Rajasthan/*In Vitro* Approaches for Plant Regeneration and Conservation of Some Potential Medicinal Plants/Rejuvenation of Mature Plant Tissues/Molecular Characterization of Diversity in *Feronia limonia* Using ISSR Markers/Molecular and Morphometric Diversity in Relation to Breeding System in *Andrographis Paniculata* (Burm. f.) Nees/An Approach to Determine Polymorphic and Sharing of Genome Between Crops of Poaceae Family Using RAPD as Genetic Tool /Molecular Biology of Fruit Ripening/Molecular Markers — an Important and Indispensable Biotechnological Tool for Crop Improvement and Conservation/Morphological and Molecular Characterization of a Rare Medicinal Herb 'Safed Musli' (*Chlorophytum Borivilianum* Sant. Et Fernand.)/Biochemical Changes Associated with Morphogenesis in Saffron/Insecticidal Genes and their Sustainable Use in Insect Resistant Transgenic Crops/Gene Tagging : A Golden Research Area in Agriculture Biotechnology/ Alternative Respiration may Have a Role in Reducing Oxidative Stress in Plants/Tissue Culture Techniques in Introgression of Resistance to *Alternaria helianthi* from Wild Sunflowers to Cultivated Sunflower (*Helianthus annuus* L.)/Virus Resistance Inducing Proteins From Plants/Effect of NaCl and Thermal Stress on Proline Content and Electrophoretic Behaviour of Protein in Small-Millets Seedlings Grown *In Vitro* /A Study of Systemic Acquired Responses to Pathogen Attack in Certain Economically Important Crops/Efficient Microdosing of Phosphorus to Pearl millet Hybrids (*Pennisetum americanum* L.) for Improved Seedling Establishment under Nutrient-Stressed Environments/Index.

Audience – PG and Research students, Scientists, Engineers: Biological, Plant, Microbiology, Bioengineering and Biotechnology.

Practical Biotechnology: Principles and Protocols



Hrudayanath Thatoi
Supriya Dash
Swagat Kumar Das

ISBN: 978-93-85909-16-0/Year 2017
Size 18 cm × 24 cm/Pages 536
Paperback/₹ 795.00

This book principally contains practical aspects of biotechnology, its theoretical background, working principles, and procedures meant for conducting experiments in the laboratories. The experiments in this book are spread in different chapters like Biochemistry, Microbiology, Immunology, Molecular biology, Plant and Animal Biotechnology, Environmental Technology, Industrial Biotechnology, Biostatistics and Bioinformatics. Besides, a chapter has been devoted towards discussion on safety guidelines, setting up of biotechnology laboratory, ethical issues concerning microbiology and genetic engineering work along with different reagent preparation for conducting laboratory experiments. Each chapter aims to describe both the theory and relevant practical details for a given technique, and to identify both the potential and limitations of the technique.

This book is designed as an intensive introduction to the various tools of molecular biology. It introduces all the basic methods of molecular biology including cloning, PCR, Southern blotting, Northern blotting, Western blotting, DNA sequencing.

This book is useful for final year undergraduate (especially project) students, post-graduate research students and research scientists and technicians who wish to understand and use new techniques in the field of Biotechnology.

Salient Features:

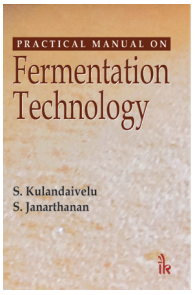
- Brief description and working principles are provided on essential instrumentation used in biotechnology experiments.
- Commonly asked questions in viva voce examinations.
- Well-tested experimental protocols for each technique.
- Reagents and preparation of each experiment separately.
- Complete schedule of experiments and the preparation required.
- Study questions at the end of each chapter.

Contents:

General Laboratory Principles/ Biochemistry/ Molecular Biology-I (Genomic Technology)/ Molecular Biology-II (Proteomics Techniques)/ Immunological Techniques/ Cytogenetics and Haematology/ Microbial Techniques/ Fermentation and Enzyme Technology/ Plant Tissue Culture techniques/ Animal Cell Culture Techniques/ Pharmaceutical Bioprocessing Techniques/ Environmental Biotechnology/ Bio-statistics/ Bioinformatics techniques/ Biophysical Techniques (Bio-instrumentation)

Audience - UG and PG students of biotechnology, biology, zoology, botany, and life sciences. Researchers and practitioners in the field of biotechnology

Practical Manual on Fermentaiton Technology



S. Kulandaivelu • S. Janarthanan

ISBN: 978-93-81141-80-9/Year 2012
Size 16 cm × 24 cm/Pages 136
Paperback/₹ 295.00

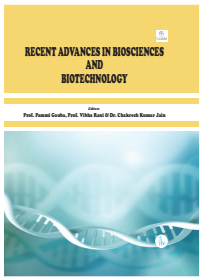
Practical Manual on Fermentation Technology is designed to introduce fermentation technology methods and protocols on the screening of industrially important microbes and production of various industrially important compounds, enzymes, antibiotics, vitamins, etc. by these microorganisms. It also provides assay protocols for the various industrially important microbial products. Each laboratory exercise contains an introductory unit, easy to follow instructions for various media and reagent preparation and procedure for screening of industrially important microbes, production and assay of various fermentation products. This manual will contribute practical knowledge in the area of industrial biotechnology, especially in the area of fermentation technology.

Contents:

Guidelines for Safety/Some Industrially Important Microbes and their Products/Isolation & Optimization of Growth Conditions of some Industrially Important Microbes/Fermenters and Types of Fermenters/Screening of Industrially Important Microbes/Production of Industrially Important Compounds/Assay /Determination of Compounds Produced by Microbes

Audience – Undergraduate and postgraduate students of Microbiology, Industrial Microbiology, Applied Microbiology, Biotechnology, Bioprocesses Technology, Bioresources Technology.

Recent Advances in Biosciencs and Bitechnolgy



Prof. Pammi Gauba
Prof. Vibha Rani
Dr. Chakresh Kumar Jain

ISBN: 978-93-90620-93-7/Year 2023
Size 18 cm × 24 cm/Pages 230
Hardback/₹2500.00

The ever evolving nature of Biosciences, Biotechnology and Bioinformatics has resulted in an exponential increase in industry-wide innovations and advent of novel technologies. This book will provide an overview ad perception on the diverse domains and related technologies written by experts. The articles in the book focus on sustainable solutions of global challenges in Life Sciences.

Contents:

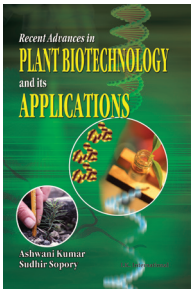
1. Preface
2. Contributors
3. Section A
   - Use of Pharmaceuticals in pre- and during COVID-19 Period and its Impact on Plants and Animals
   - Potential Role of Trigonella foenum-graceciumin in Diabetes and Cancer
   - The Heart Gut Axis: A New Possible Target to Treat Cardiovascular Complications Associated with Gut Dysbiosis
   - Artificial Intelligence in Personalized Medicine
   - Revolutionizing Resistance Study: Computational Approaches to Analyzing Antibiotic, Drug, and Gene Resistance
   - Exploration and Identification of Herbal Medicine for Major Depressive Disorder using In-Silico Molecular Interaction Study
   - Bacterial Cellulose: Global Market, Applications and Future Prospects
   - Debittering Enzymes used in Food and Beverage Industry
   - In-Silico Exploration of synergism of Anticancer Drugs: The Current Updates
   - Mushroom as an Emerging Factor in Skin Health
   - Dietary Aspects of Cardiovascular Disease and its Sex Specificity: A Lifestyle Disease
4. Section – B
   - Role of Muscle Derived Cytokines in Skeletal Muscle During Aging
   - Effects of Gingerols, Shogaols, and Paradols on Cancer Cells
   - Current Perspective of Diagnosis and Treatment of Pancreatic Cancer
   - Bacterial Cellulose: Functionalization and its Applications
   - Chitosan and its Derivatives: Technologies, Applications and Global Market
   - Small Non-coding RNAs for Improved Skin Health
   - Understanding Anti-aging through Ancient Indian Scriptures, Breakthroughs, and Recent Advancements

Audience –

Recent Advances in Plant Biotechnology and its Applications

Editors

Ashwani Kumar • Sudhir K. Sopory



ISBN: 978-81-89866-09-9/Year 2008
Size 18 cm × 25 cm/Pages 706
Hardback/₹ 2495.00

The present book is an encyclopaedia of latest information in the field of biotechnology and covers comprehensive reviews and articles on the major subjects of study in this field.

Recent Advances in Plant Biotechnology discusses genomics with special reference to crop plants, modulation of chlorophyll genes, genetic engineering; especially of foliage plants, trees and fruits, bamboos and crop plants, engineering of recombinant plastids, molecular aspects of embryogenesis in cereals, identity especially of foliage plants, trees and fruits, bamboos and crop plants, engineering of recombinant plastids, molecular aspects of embryogenesis in cereals, identity preservation in genetically modified crops, environmental biotechnology with regard to salt tolerance, medical biotechnology, gene targeting, biotechnological applications of plant viruses, enhanced production of recombinant proteins, plant based macromolecules of therapeutic importance, antioxidant potential of plants for human welfare, bio-crude and bio-fuels from plants etc.

Contents:

Wild Species of *Oryza* as an Important Reservoir of Useful Alleles/Plant Genetic Transformation: Methods & Emerging Trends/ The Engineering of Recombinant Plastids in Higher Plants/Inducible Gene Expression Systems as Tools for Plant Functional Genomics/ Gene Targetting in Higher Plants/Effect of Brassinolide on Growth, Yield, Metabolite Content & Enzyme Activities of Tomato (*Lycopersion esculentum* Mill)/Ornamental Foliage Plants: Improvement through Biotechnology/*In Vitro* Propagation of Tropical and Sub-tropical fruit Crops/*In Vitro* plantlet regeneration in *Asparagus racemosus* through Shoot Bud Differentiation on Nodal Segments/Micropropagation of Ringal Bamboo *Drepanostachyum falcatum* (Nees) Keng. F. Through Nodal Segments/Isolated Microspore Embryogenesis in Cereals: Aspects and Prospects/Plant Regeneration from Cell Suspension Culture-derived Protoplasts of *Phellodendron amurense* Rupr./ Importance of Micropropagation Technique in Enhancing the Productivity of Crops/High Efficiency Transformation in *Artemesia annua* with *Agrobacterium tumefaciens* / Identity Preservation in Genetically Modified Crops/Genetic Improvement of Castor (*Ricinus communis* L.) through Tissue Culture and Biotechnological Tools/ Enhanced Production of Recombinant Proteins from Plant Cells/ Light and Dark Modulation of Chlorophyll Biosynthetic Genes in Response to Temperature/Signalling Components in Programmed Cell Death: Molecular and Functional Similarities between Animals and Plants/Designing New Plant Genotypes with Enhanced Resistance to Salinity/Defence Response of Moth Bean (*Phaseolus acontifolius*) to *Macrophomina phaseolina*: Role of Polyphenols, PAL and b-1,3-glucanase/Host-Pathogen Interaction in *Sesamum indicum*: Synthesis of PR-Proteins/Regulation of Stomatal Opening and Signal Transduction Components in Guard Cells/*Allium sativum* Leaf Lectin, A Potent Sap Feeding Insect Control Protein Expressed in Rice and Mustard/Molecular Tools in Medicinal Plants: A Review/Forskin Biosynthesis and Invertase Activity in *Agrobacterium rhizogenes* mediated Transformed Roots of *Coleus forskohlii*/A Novel Source for Furanocoumarins: *Ruta graveolens* L./ Antioxidant Potential of Plants and Their Impact on Human Health/ Arabinogalactan and Arabinogalactan-protein Complexes (AGPs) a Natural Plant Derived Macromolecule of Therapeutic Importance/ Transgenics of Some Medicinal Plants/*In Vitro* Regeneration of a Rare Medicinally Potent Plant of Eastern Himalayan Hotspot/A Comparative Study of Growth Kinetics in Hairy Root Cultures of *Solanum khasianum* Clark Grown in Shake Flasks and Bioreactors/ Micropropagation and Alkaloid Production through Somatic Embryo Cultures of Corydalis/Biotechnological Approach on Production of Ginkgolides from Cell Cultures of *Ginkgo biloba* L./Applications of Biotechnology in Indian Ginseng (Ashwagandha): Progress and Prospects/Prospects of Ephedrine in Desert Plants of Rajasthan/ Genetic Engineering: A Powerful Tool to Combat Viral Diseases of Plants/Ayurvedic Medicine: Some Potential Plants for Medicine from India/Bioengineering of Crops for Biofuels and Bioenergy/Genetic Engineering of Orchids/State-of-the-art Genome Profiling (GP): A Key Tool for Plant Biotechnology /Application of Genetic Silencing in Crops/Index.

Audience – Postgraduates and researchers in plant biotechnology and related sciences in departments of plant science, biotechnology, bioscience, environmental science, food biosciences and chemistry. It will also be of interest for professionals working in the plant biotechnology industry.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Recent Trends in Life Sciences



Editors

M.H. Fulekar • R.K. Kale

ISBN: 978-93-82332-25-1/Year 2014
Size 18 cm × 24 cm/Pages 412
Hardback/₹ 3225.00

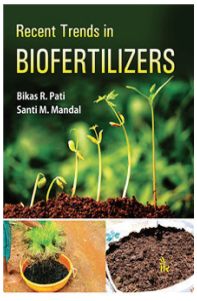
Life sciences research plays an important role in the R&D system, for appliances in the multidisciplinary areas, related to living creatures. It generates new knowledge and understanding that provide the foundation for applied research and development. The basic research provides reliable information on multidisciplinary area of the biology for application in the life system, more intensive knowledge creation through basic research could be seen as a way to enhance innovative activities. Life sciences advances go beyond molecular base science. Improvement also puts ahead behavioural sciences and ecology. The greatest advances of the recent past requirement combination of technology which include ecosystem and biodiversity study, biotechnology aspect, proteomic and genomic studies leading to metagenomic and the healthcare using the diagnosis, prevention of disorder and disease. The combination of multidisciplinary research in plants, animals, microorganisms their interaction and the molecular biology, genetic engineering approaches and their advances in cell biology research has taken the life sciences, to the greatest extent for the wide horizons of life. This book deals with the recent trends in life sciences and will be beneficial for the postgraduates and research scholars of life sciences, environmental science, molecular biologist and biotechnologists.

Contents:

Biodiversity and its Conservation/Biodiversity of Phytoplankton, Zooplankton and Benthos in Bay of Bengal at East Coast of India, Andhra Pradesh/Sustainable Development-Environment, Economic and Social Concept/Bioprospecting of Euphorbia nivulia Buch.-Ham./Arbuscular Mycorrhizal Fungi (AM Fungi): A Potential Tool for Augmenting Carbon Dioxide Sequestration/Interactions between arbuscular mycorrhizal fungi and N-fixing bacteria, rhizobium/ Biotechnology: Applications for Conservation and Sustainable use of Plants of Fragile Arid Ecosystems/Advancement in Environment Biotechnology: Applications of Bioinformatics in Bioremediation/ Replacement of Pine by Oak in Central Himalaya and its Implications in Forest Management/The Bioelectromagnetics: Present Explorations/ Antioxidant Enzymes: A Mode of Defense Mechanism during the Process of Phytoremediation of Heavy Metals/Reuse and Recycling of Treated Distillery Spent Wash–A Novel Approach/Uptake of Chromium And Inorganic Nutrients from Aqueous Solutions by Two Aquatic Plants/Smog Pollution (PAN and Ozone): A Case Study of Delhi/METAGENOMICS: A Novel Techniques and Approaches for Uncultured Micro Organisms/Nodulated Native Legumes in an Arid Environment of Indian Thar Desert/Current Trends in Diagnosis, Prevention and Treatment of Cancer/The Immune System-Sleep Benefits in Health and Cognition/Climate Change: India's Perspection, Policies and Action Plans for Sustainable Development/Index

Audience – Postgraduate & research scholars of Life Sciences, Environmental Sciences, Molecular Biologist & Biotechnologists.

Recent Trends in Biofertilizers



Bikas R. Pati • Santi M. Mandal

ISBN: 978-93-84588-65-6/Year 2016
Size 18 cm × 24 cm/Pages 280
Hardback/₹ 2195.00

Recent Trends in Biofertilizers comprises sixteen articles contributed by over forty distinguished academicians from India, Brazil and Egypt. These articles jointly address the broader need of increasing soil fertility through sustainable methods and practices.

Biofertilizers contain a wide range of naturally chelated plant nutrients, carbohydrates, amino acids, trace elements and plant growth promoting vitamins and hormones. These components are discussed appropriately in the book. Fresh insights into biofertilizer technology, biotechnology-based biofertilizers, and other recent developments in this area are covered in depth. Discussion of the tremendous advancements made in the last decade in biofertilizer technology through development of biotic and abiotic stress tolerant microbial strains is one of the hallmark features of this book. The book also appropriately addresses the soil aspects -- nutrient index values for different types of soil have been presented. Other major highlights of the book are coverage of liquid biofertilizers; benefits of different biofertilizer efficient strains along with the constraints in the production, distribution, field and marketing; quality control and assurance aspects; and application of bioinformatics.

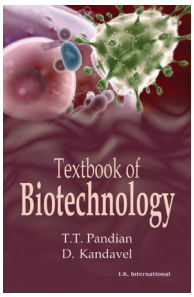
This book will be an immensely useful for teachers and students of undergraduate colleges, universities, and research scholars engaged in agricultural microbiology, trainees in biofertilizer industry and agricultural development officers.

Contents:

Quality Control of Biofertilizers: Current Scenario and Trends/ Status of the Biofertilization Technology and Biosafety of Biofertilizers in Egypt/ Environment Friendly Phosphorus Biofertilizer as an Alternative to Chemical Fertilizers/ Liquid Biofertilizers: Potentials and Prospects/ Understanding the Molecular Genetics of Microbial Phosphate Solubilization/ Phosphorus and Potassium Rock Biofertilizers with Acidithiobacillus and Organic Matter in Tropical Crops/ Potential use of Rhizobacteria as Biofertiliser and its Role in Increasing Tolerance to Drought Stress/ Biofertilizer: An Alternative Fertilizer and Constraints in Its Technology/ Application of Bioinformatics in Biofertilizer Technology/ nifH Database: Insights into Diversity and Evolution to Explore Next Generation Nitrogen Fixer/ Arbuscular Mycorrhizal Dependency of Plants/ Vermicomposting to Modified Vermicomposting: Technological up Gradation For Improving Quality and Nutrient Status/ Biofertilizer for Bioremediation/ Plant Growth Promoting Rhizobacteria and Their Potential Approach to Bioremediation of Toxic Metal/ Potential Characteristic Features of Bio-Fertilizers/ Integration of Ecofriendly Biotechnological Tools For Sustainable Environmental vis-a-vis Bioresource Management/ Index

Audience - Students, teachers and researchers in Agriculture and its allied areas; policy makers and fertilizer industry professionals.

Textbook of Biotechnology



T.T. Pandian • D. Kandavel

ISBN: 978-81-89866-81-5/Year 2008
Size 16 cm × 24 cm/Pages 576
Paperback/₹ 395.00

This book covers almost all recent areas of biotechnology with an in-depth knowledge and illustrated diagrams.The contents advance logically from the basics of cell and molecular biology to that of diversified recent hot areas of biotechnology. Some of the recent developments like gene therapy, gene cloning, stem cell therapy, etc., are extensively dealt with. It also includes review questions at the end of each chapter and a detailed bibliography given at the end.A distinctive feature of this book is the discussions on public concerns about biotechnology, intellectual property rights and cryopreservation and the future it holds good for humanity. Extensive coverage is given to microbial enzymes and biotransformations, bioinformatics, plant tissue culture methods, genetic engineering and its applications, animal biotechnology, fermentation biotechnology, biofertilisers, single cell protein, biological control and environmental

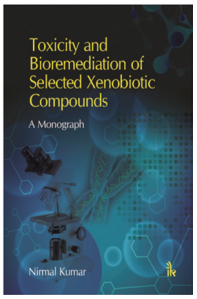
biotechnology.This book covers the Biotechnology syllabus of various universities and can also be used as a companion for various competitive examinations.

Contents:

An Introduction to Biotechnology/Introduction to Living System /Nucleic Acids and their Organization/The Central Dogma/ Molecular Techniques/Genetic Engineering/Applications of Genetic Engineering/Bioinformatics/Crop Production through Plant Tissue Culture-I & II/Animal Biotechnology/Cryopreservation/ Fermentation Biotechnology/Single Cell Protein/Biofertilizers/ Biological Control/Microbial Enzymes and Biotransformations/ Environmental Biotechnology/Intellectual Property Rights/Public Concerns in Biotechnology/Index.

Audience – IAS, IPS, CSIR-UGC NET, GATE, ASRB, ICMR, JNU Joint M/Sc Biotech. Entrance Exam, etc. The Biotechnology/ Engineering Graduates (B. Tech and M. Tech).

Toxicity and Bioremediation of Selected Xenobiotic Compounds: A Monograph



Dr. Nirmal Kumar

ISBN: 978-93-86768-60-5/Year 2023
Size 16 cm × 24 cm/Pages 348
Hardback/₹ 1995.00

This book evaluates and assesses the toxicity, mode of action of xenobiotic compounds like 2,4-D ethyl ester (herbicide), pencycuron (fungicide), Anthracene (ANT) and Pyrene (PYR) (PAHs) on selected species of microorganism: Cyanobacteria—Nostoc *muscorum* Agardh, Anabaena—*fertilissima* Rao, and *Synechocystis* sp.; Bacteria—*Bacillus benzoevorans* and Pseudomonas indoxyladons with Synechocystis sp. and consortium separately and its biotransformation into nontoxic forms.

The book broadly deals with:

- mode of action of xenobiotics by measuring their toxicity, impact on growth, pigments, biochemical, enzymatic and morphological variations;
- further to understand their toxicity and molecular mechanism, functional group variations by FTIR, change in expression of protein profile by SDS PAGE and genomic DNA profiling by Random Amplified Polymorphic DNA (RAPD) and molecular characterization by 16S rDNA amplification in response to various doses; and
- their biotransformants and reduction of applied xenobiotics compounds during bioremediation process by selected species of cyanobacteria, bacteria and consortium *in vitro* and *ex situ* (microcosm).

Salient Features:

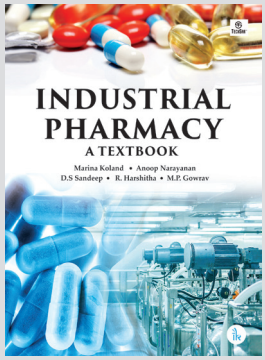
- Bioremediation and biodegradation of Xenobiotic compounds—pesticides and PAH's toxicity by Cyanobacteria and bacterial characters.
- Systematic practical design and organization to approach toxicological and bioremediation by Cyanobacteria and bacterial defined artificial consortia.
- Toxicological effects of selected Herbicide—2,4-D ethyl ester, Fungicide—Pencycuron, two model PAHs-Anthracene (ANT), and Pyrene (PYR) on growth, pigments, biochemical, enzymatic, functional groups, molecular and morphological variations.
- Molecular fate, biochemical response and biotransformants during bioremediation by three cyanobacterial species and bacterial define artificial consortia in vitro.
- Role of hydro-geochemical environmental ingredients on bioremediation (bioaugmentation and biostimulation) of PAHs by Bacterial consortia *ex situ*.

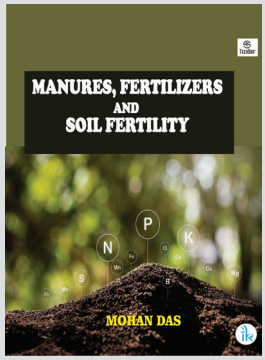
Contents:

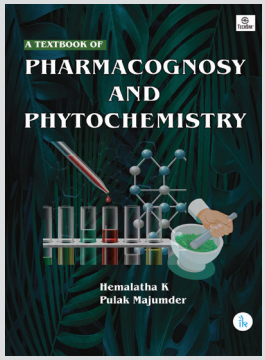
1. Introduction to Xenobiotic compounds, Types of Bioremediation and Biodegradation, pesticides and its remediation, PAHs toxicity and remediation, bacteria and cyanobacteria in bioremediation./2. Practical organization and design to approach toxicological effects of selected Pesticides and model PAHs and Bioremediation by Cyanobacteria and Bacterial defined artificial consortia in vitro studies./3. Toxicological Effects of Herbicide-2,4-D ethyl ester and Bioremediation by three Cyanobacterial species *in vitro*./4. Toxicological Effects of Fungicide – Pencycuron and Bioremediation by three Cyanobacterial species *in vitro*. Toxicological effects of two model PAHs-Anthracene (ANT) and Pyrene (PYR) and Bioremediation by three Cyanobacteria species- *in vitro*./5. Toxicological effects of model PAHs and Bioremediation by Cyanobacterial and Bacterial define artificial consortia *in vitro*./6. Effect of Environmental ingredients on Bioremediation of PAHs by Cyanobacterial and Bacterial consortia- *Ex situ*.

Audience – Life Sciences

NEW RELEASES







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A Textbook of Algae



Dr Prasanta Mallick
Dr Sudip Chatterjee

ISBN: 978-93-90620-33-3/2024
Size TBA/Pages TBA
Paperback/₹ TBA

Algae is the basic component in the living world since pre-historic times. It has great impact on biological science, environment and directly on the human society. Algae is not only the branch of Botany, it's a combination of both Botany and other branches of biology.

The book provides a comprehensive and up-to-date information of applied phychology,classification, Cyanophyta, Prochlorophyta, Glaucophyta, Chlorophyta, Rhodophyta, Heterokontophyta, Euglenophyta, Dinophyta, Cryptophyta, Prymnesiophyta, Chlorarachniophyta and Phylogeny along with the modern development of algal research.

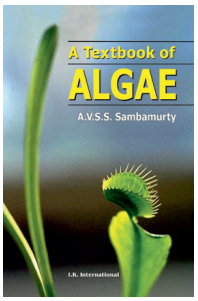
This is a textbook for the undergraduate and postgraduate student of Botany and Biology.

Salient Features:

- In-depth study with proper illustrations, diagrams, microphotographs, SEM photographs
- Includes modern area in the field of Phycology and updated version of classification
- Enlightens the field of phylogeny and modern aspects of application
- Question answer series, practical class study materials with illustrations

Audience: Undergraduate and Postgraduate student of Botany and Biology.

A Textbook of Algae



A.V.S.S. Sambamurty

ISBN: 978-81-88237-44-9/Year 2005
Size 18 cm × 24 cm/Pages 336
Paperback/₹ 395.00

A Textbook of Algae caters to the students of Botany pursuing B.Sc. (Hons.), M.Sc. and related fields like Medical Botany, Pharmacy, Agricultural Botany and Horticulture.

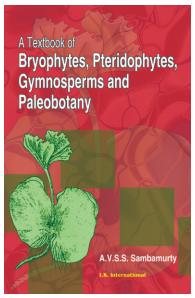
The book is amply illustrated with examples and includes several general topics like structure and reproduction of algae, life cycles, chemical constituents, ecology of algae, economic importance of algae etc. Type study has been given class-wise, for instance Chlorophyceae, Xanthophyceae, Bacillariophyceae, Phaeophyceae, Rhodophyceae and Myxophyceae.

Contents:

Classification of Algae/Habitat and Habit of Algae (Ecology of Algae)/Commercial Cultivation of Algae/Chemical Constituents of Seaweeds/Economic Importance of Algae and Chemical Constituents of Algae/Cytology and Ultrastructure of Algae/ Thallus Organization of Algae/Life Cycles in Algae: Phylogeny Sexualityin Algae/Class Chlorophyceae: General Characters and Type Study/ Class Xanthophyce-ae/Bacillariophyceae/Class Phaeophyceae: General Characters and Type Study/Class Rhodophyceae: General Characters and Type Study/Class Myxophyceae/Appendices/Index.

Audience – B.Sc. (Gen.) and (Hons.) Botany.

A Textbook of Bryophytes, Pteridophytes, Gymnosperms and Paleobotany



A.V.S.S. Sambamurty

ISBN: 978-81-88237-45-6/Year 2005
Size 18 cm × 24 cm/Pages 584
Paperback/₹ 545.00

The book is amply illustrated with diagrams. Almost all important genera are discussed giving details of structure, anatomy, developmental stages of reproductive organs from different sections like Bryophytes, Pteridophytes and Gymnosperms. Paleobotany section deals with important fossil genera from Pteridophytes and Gymnosperms. Various comparisons of different genera are given in all sections. Experimental studies of Bryophytes, Pteridophytes and Gymnosperms are discussed from recent literature.

Contents:

Part I: Bryophytes : Introduction to Bryophytes/Riccia, Marchantia, Pellia and Porella/Anthoceros/Sphagnum, Funaria, Polytrichum, and Pogonatum/General Topics.

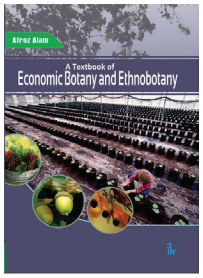
Part II: Pteridophytes : Introduction and Classification/Plant Body in Pteridophytes/Psilotum/Lycopodium, Selaginella and Isoetes/Equisetum/Ophioglossum,Gleichenia, Marsilea, Pleopeltis, Dryopteris, Pteridium and Pteris/General Discussion and Summary for Ferns/General Topics.

Part III: Gymnosperms : Introduction and Classification/Cycas/ Pinus/Ephedra/Gnetum/Ginkgoales/Taxales/ Welwitschiaceae/ General Topics.

Part IV: Paleobotany : Paleobotany/Fossils: Voltziales/Cordaites References/Index.

Audience – B.Sc. (Gen.) and B.Sc.(Hons.).

A Textbook of Economic Botany and Ethnobotany



Afroz Alam

ISBN: 978-93-86768-93-3/Year 2020
Size 18 × 24 cm/Pages 598
Paperback/₹ 595.00

Economic Botany and Ethnobotany is identified with the investigation of how individuals around the world, and of a specific culture and locale utilize indigenous and exotic plants. Botanists investigate how plants are utilized for such things as food, cover, medication, dress, chasing and strict functions. This aspect has its roots in botany, the study of plants.

Botany, in turn, originated in part from an interest in finding plants to help fight illness. Thinking about the effect of plant use since forever in the human social structures of financial aspects, legislative issues, religion, and science, this book contributes incomprehensibly to our comprehension of mankind's history and the present reality related with plants.

The book contains economic botany related 14 units regarding origins, domestication, dispersal and classification of cultivated crops; all about cereals (contains millets and pseudo-cereals); pulse crops; sugars, starches and cellulose products; spices and condiments; beverages, fumitories and masticatories yielding plants; essential oils; rubber; medicinal plants; wood and cork; fibres; vegetables; petro crops; ornamental plants. Unit 15 is all about ethnobotany; followed by methodology of ethnobotanical studies as unit 16; Unit 17 is related to medico-ethnobotanical sources in India and the last unit is about

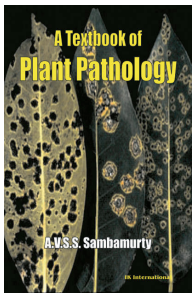
legal aspects of ethnobotany. Overall, the reader will get almost every facet related to these two closely related twigs of botany.

Contents:

Origins, Domestication, Dispersal and Classification of Cultivated Crops/Cereals/Pulse Crops/Sugars, Starches and Cellulose Products/ Spices and Condiments/ Beverages, Fumitories and Masticatories Plants/Essential Oils/Rubber/Medicinal Plants/Wood and Cork/ Fibres/Vegetables/ Petrocrops/Ornamental Plants/Ethnobotany/ Methodology of Ethnobotanical Studies/Medico-Ethnobotanical Sources in India/ Ethnobotany and Legal Aspects/References/Index

Audience – B.Sc Botany/Botany Hons.

A Textbook of Plant Pathology



A.V.S.S. Sambamurty

ISBN: 978-81-88237-60-9/Year 2006
Size 18 cm × 24 cm/Pages 424
Paperback/₹ 505.00

A Textbook of Plant Pathology is a comprehensively compiled work and contains fundamental facts and aspects of plant pathology. It will serve as an introduction to plant pathology for the beginners in this field. The text includes about 50 diseases in all crop plants giving details of symptoms, disease cycle and control measures.

The book is divided into two parts, namely, Principles of plant pathology and important plant diseases in crops. Principles of plant pathology includ history of plant pathology, symptoms of plant diseases, epidemiology and forecasting of plant diseases, host-parasite interrelationships and their interactions, effect of climatic conditions on plant diseases, physiologic specialization, defence mechanism, methods of studying plant diseases and principles of plant disease control.

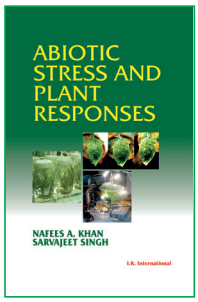
Some diseases caused in different crop plants like cereals, pulses, vegetables, oilseeds, fibre crops, spices, condiments, fruits, sugarcane, tea, coffee and tobacco etc. are discussed in detail. Every disease discussed consists of causal organism, symptoms, disease cycle, breeding, disease-resistant varieties and chemical control methods. The book also includes a list of periodicals on plant pathology and that of plant pathology institutes the world over.

Contents:

History of Plant Pathology/Significance of Plant Pathology/ Host-Pathogen Relationships (Pathogenicity)/Classification of Plant Diseases and Principles of Plant Pathology/Genetics of Pathogenicity/Chemotherapy of Plant Diseases, Classification of Fungi and Symptomatology/Mycoplasms and Viruses/Viral Diseases/Bacterial Diseases and Plant Galls/Plant Diseases/ Ecology, Economic Importance and Fungal Biotechnology/Index.

Audience – B.Sc. (Gen.) and B.Sc. (Hons.) in Botany, M.Sc. and Related Fields like Medical Botany, Pharmacy, Agriculture, Botany and Horticulture.

Abiotic Stress and Plant Responses



Editors

Nafees A. Khan • Sarvajeet Singh

ISBN: 978-81-89866-95-2/Year 2008
Size 18 cm × 24 cm/Pages 312
Hardback/₹ 1495.00

Abiotic stresses such as temperature, radiation, salinity, heavy metals and drought are the main factors that limit crop productivity. The anthropogenic activities and changed agricultural system, intense use of chemical fertilizers and artificial irrigation have increased temperature, UV-B radiation, drought, salinity and heavy metals stresses and caused yield losses annually to a greater extent. To overcome the yield losses due to abiotic stresses, plants need to possess mechanisms of avoidance and tolerance to stress. For sustainable agriculture development, future crops should have abiotic stress resistant traits and the mechanism for stress tolerance. The tolerance mechanisms can also be improved by the development of new techniques employing plant physiology and plant molecular biology tools. In this present book the advances in the area of abiotic stress responses and stress management have been included. The information may be useful in elucidating limits and tolerance of a plant to abiotic stress.

The present volume, comprising seventeen chapters by outstanding and eminent specialists across the world, covers the information on abiotic stresses such as salinity, heavy metals, drought and herbicides.

The book:

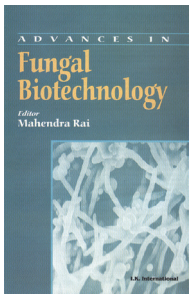
- describes physiological and molecular responses, role of signaling molecules and plant phenolics in abiotic stress tolerance
- covers the information on salinity induced oxidative stress, strategies of halophytes to survive in a salty environment and tolerance mechanism
- discusses heavy metal induced modulation of gene expression, in general responses and role of metal binding peptides and antioxidants
- deals with the resistance mechanism related to changes in endogenous polyamines to drought stress
- covers the information on herbicide contamination in plants
- describes the significance of salicylic acid, a plant hormone, in abiotic stress tolerance.

Contents:

Physiological and Molecular Responses of Higher Plants to Abiotic Stresses/Signaling Molecules in Plants under Abiotic Stress/Plant Phenolics and their Role in Abiotic Stress Tolerance/Salinity and Oxidative Stress/Strategies of Halophytes to Survive in a Salty Environment/Salinity Tolerance Mechanisms of Higher Plants/ Modulation of Gene Expression in Plants Exposed to Heavy Metals/ Responses of Higher Plants to Heavy Metal Stress/Metal-Binding Peptides and Antioxidant Defense System in Plants: Significance in Cadmium Tolerance/Resistance to Drought in Crops/Changes in Endogenous Polyamines and Some Stress Markers Content Induced by Drought, 4PU-30 and Abscisic Acid in Wheat Plants /Detection of Herbicide Contamination in Plants through Changes in Leaf Spectral Reflectance and Fluorescence/Involvement of Salicylic Acid in Plant Defense against Stresses/The Role of Salicylic Acid in Thermotolerance of Plants/Salicylic Acid and Energy Exchange in Plant Cells/Genotype Differences of Cadmium Toxicity in Soybean Seedlings: The role of Salicylic Acid and Phenols/ Protection of Ultrastructure in chilling-Stressed Banana Leaves by Salicylic Acid.

Audience – Postgraduates and Researchers in Agricultural Science.

Advances in Fungal Biotechnology



Editor

Mahendra Rai

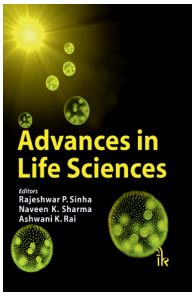
ISBN: 978-81-89866-53-2/Year 2009
Size 16 cm × 24 cm/Pages 528
Hardback/₹ 2295.00

(See on page 182)

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Advances in Life Sciences



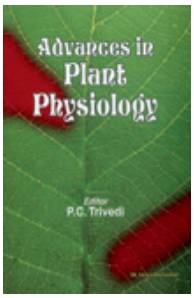
Editors

Rajeshwar P. Sinha
Naveen K. Sharma
Ashwani K. Rai

ISBN: 978-93-81141-04-5/Year 2011
Size 18 cm × 24 cm/Pages 520
Hardback/₹ 2495.00

(See on page 160)

Advances in Plant Physiology



Editor

P.C. Trivedi

ISBN: 978-81-88237-69-2/Year 2006
Size 18 cm × 25 cm/Pages 272
Hardback/₹ 995.00

In the present scenario, with the increasing pressure posed by a rapidly growing population and diminishing per capita arable land and sources of irrigation, the role of plant physiologists in increasing agricultural and horticultural production by economically viable means, is significant.

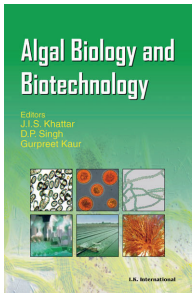
The present book incorporates articles covering latest information on the varied aspects of plant physiology, like diagnosis and management of physiological disorders in fruit production, physiology of vegetable crops, breeding crops for dryland conditions, effect of sulphur dioxide on growth, photosynthesis, antioxidant enzyme activities and so on. Topics such as abiotic stress, macronutrient stress and stress caused by pollutants also form part of the book. Articles on the effect of herbicides, growth hormones, photoquality on germination and physiology of rice and groundnut provide useful information for improving crop yield. This book would serve as a useful reference for teachers, scientists and planners in the fields of Botany, Plant Physiology, Agriculture, Forestry and related fields.

Contents:

Diagnosis and management of physiological disorders in subtropical fruit production/Breeding efficient crops and varieties for dry land conditions/Degree of submergence stress tolerance of lowland rice at varying growth stages/Effect of SO_2 on growth, photosynthesis and antioxidant enzyme activities in Blackgram (Vigna mungo L. Hepper)/Stimulatory effect of herbicide (Atrataf 50W) on pollen germination and tube growth of successive flowers of Apocyanaceal A critical review/Abiotic stresses and physiology of drought resistance in Chickpea/Stress caused by Nagaon Paper Mill effluents on growth, development and yield of rice (Oryza sativa L. var Mahsuri) plant/Advances in physiology of vegetable crops: A brief background/Protected cultivation of vegetables in North Indian conditions/System of rice intensification: A physiological perspective/Study of the interactive effect of Aba and Cytokinin on mustard under soil water stress condition/Effect of different photoquality on germination and early seedling growth of three varieties of Vigna radiata (L.) Wilczek/Absolute growth and growth rate of winter crop Guava cv. Sardar of different maturities during the ontogeny/A comparative analysis of vegetation and soil characteristics of Montane broad-leaved, mixed pine and pine forests of north-east India/Macronutrient stresses and their management in crop plants/Bambara Groundnut: Its physiology and introduction in India/Seed primming and potash nutrition as the management tools for drought investigation in upland summer rice.

Audience – Postgraduates and Research Scholars in Plant Sciences.

Algal Biology and Biotechnology



Editors

J.I.S. Khattar • D.P. Singh
Gurpreet Kaur

ISBN: 978-93-80026-19-0/Year 2009
Size 18 cm × 24 cm/Pages 278
Hardback/₹ 1295.00

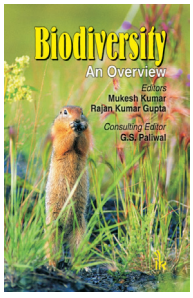
In the recent past, many advances have been made in the field of biology and biotechnology of algae, especially microalgae. This book includes chapters on taxonomy, diversity and physiology of blue-green algae as these organisms are most important from biotechnological point of view. Use of algae as biofertilizer, source of natural colours, bioactive compounds, phytochemicals with pharmaceutical and biotechnological applications, food and feed has been discussed. Environmental pollution is the major problem all over the world. The potential of algae in combating water pollution is also highlighted. Depleting fossil fuel is another concern and it is felt that there is a need for alternative renewable resources. Algae as a potential source of biofuel are also discussed in this book.

Contents:

Morpho-taxonomy of Coccoid Cyanobacteria/Cyanobacterial Ecology and Molecular Approaches for Biodiversity Analysis/Cyanobacteria and Micro-algae on Building Facades and Stone Surface of Monuments – An Ecophysiological Perspective/Some Secrets of Ubiquity in Cyanobacteria/Akinete Differentiation in Cyanobacteria/Nitrogen Metabolism in Cyanobacteria/Developments in Cyanobacterial Biofertilizer/Distribution, Preservation and Maintenance of Cyanobacterial Diversity and their Application as Biofertilizer/Cyanobacterial Diversity in Wheat Fields: Taxonomic and Functional Aspects/Microalgae: A Source of Natural Colours/A Decade Odyssey with Cyanobacteria: As a Source of Bioactive Molecules and a Model for Salt Stress Study/Seaweeds: A Survey of Research and Utilization/Cyanobacterial Toxins and Public Health Issues/Secondary Metabolite Production in Cyanobacteria/Renewable Energy Sources: Potential of Microalgae for Production of Environmental Friendly Biofuel/Bioremediation of Wastewater and Role of Microalgae/Role of Cyanobacterial Oxidases in Bioremediation–An Overview/Index.

Audience – Postgraduate & Researchers in Biology & Biotechnology.

Biodiversity
An Overview



Editors

Mukesh Kumar • Rajan Kumar Gupta

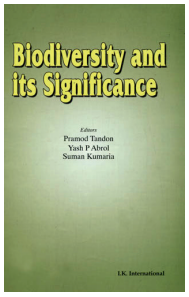
Consulting Editor

G.S. Paliwal

ISBN: 978-93-80578-88-0/Year 2011
Size 18 cm × 24 cm/Pages 478
Hardback/₹ 3995.00

(See on page 233)

Biodiversity and its Significance



Editors

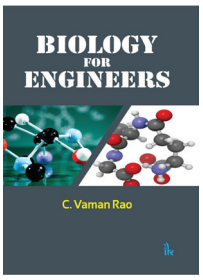
Pramod Tandon • Yash P. Abrol
Suman Kumaria

ISBN: 978-81-88237-81-4/Year 2007
Size 18 cm × 25 cm/Pages 384
Hardback/₹ 1495.00

(See on page 234)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Biology for Engineers



C. Vaman Rao

ISBN: 978-93-90620-61-6/Year 2021
Size: 16 cm × 24 cm/Pages 256
Paperback/₹ 345.00

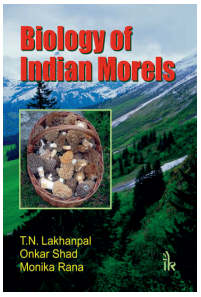
"Biology for Engineers" is a book specially written for the students of engineering streams of various discipline to make them understand and appreciate the link between biological principles and engineering technology. The book is organized into four chapters - Chapter 1 discusses the significance of molecules and elements of life; Chapter 2 discusses how the living cell and the biological system in this universe work on thermodynamics principles; Chapter 3 discusses the plasma membrane and its universality across the living system and Chapter 4 gives its reader the knowledge of membrane electrical potential that has been used for devising objects that will facilitate heart beat, hearing aid, bionic eye for visually impaired. Different examples of application of anatomical features in engineering technology and how certain anatomical features have been implemented in developing devices in the engineering technology are discussed in the book.

Contents:

Molecules and Elements of Life/Biological Thermodynamics/ Membrane Biology and Engineering Principles/Adoption of Anatomical Principles for Engineering Design/Index

Audience – B. Tech First Year Core.

Biology of Indian Morels



T. N. Lakhanpal • Onkar Shad
Monika Rana

ISBN: 978-93-80578-24-8/Year 2010
Size 18 cm × 24 cm/Pages 266
Hardback/₹ 1295.00

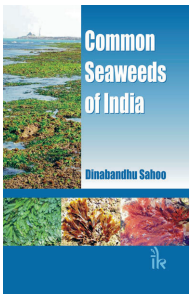
The morels is one of the most delicious and costliest wild eible mushrooms of the world. During the last century significant advances have been made in the study of morel biology with the sole aim of artificial cultivation. But all efforts to domesticate them have not been wholly fruitful. The book is an attempt to compile all the relevant information on morel biology so that more interest in morel research is stimulated ultimately paving the way for cultivation. The monograph contains 14 chapters; each chapter is devoted to and provides original information and observations on various aspects of morel biology. It begins with an overview of morel biology followed by the life cycle pattern, classical and molecular systematic treatment, ecology, physiology, mycorrhizal and rhizomorphospheric relationships, nutritive and nutraceutical profile, observations and ethno-mycological and sociobiological impact, cytology of ascus development and the culinary aspects of morel consumption. The objective is to offer a detailed account of different aspects of morel biology and biodiversity.

Contents:

Biology of Morels - An Overview/The Life Cycle Pattern/ Systematic Treatment of Morels - I/Systematic Treatment of Morels - II: Genotypic Polymorphism and Diversity/Ecological Aspects/Physiological Aspects of Morels/Nutritive Composition/ Nutraceutical Potential/Rhizomorphosphere Relationships/ Ethnomycological Aspects/Sociobiological Aspects/Mycorrhizal Association of Morels/Cytology of Ascus Development in Morels/ Culinary Aspects of Morels/Annexure/References/Index.

Audience – Students of Biology and Agriculture.

Common Seaweeds of India



Dinabandhu Sahoo

ISBN: 978-81-90777-06-3/Year 2010
Size 16 cm × 24 cm/Pages 208
Hardback/₹ 1295.00

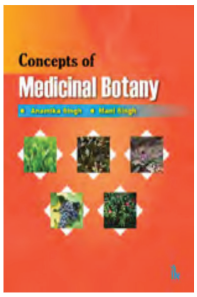
India has a coastline of more than 7000 km and an Exclusive Economic Zone (EEZ) over 2 million km^2. A total of 770 species of seaweeds have been reported from different parts of the Indian coasts which includes 184 species of green, 166 species of brown and 420 species of red (Sahoo et al., 2001). Unlike the oriental countries like Japan, China, Korea, etc. India does not have a long history about the uses of seaweeds as food and various other purposes. However, in recent years a lot of interests have been generated by the industries, academia and researchers in the field of seaweeds research and utilization. One of the most difficult job in this area is the identification of various species. This book deals with identification of some of the common seaweeds of Indian coast. Only the most suitable specimens are described and illustrated with colour photographs. Most of the photographs were taken in the natural habitat, but in some cases herbarium specimens have been used. The work is the compilation of the author's field studies of more than two decades. Common Seaweeds of India will be useful to teachers, researchers, students, industries and many others in identifying the common seaweeds.

Contents:

Part 1. Important Sea Coasts of India/**Part 2.** Chlorophyceae (Green Seaweeds)/**Part 3.** Phaeophyceae (Brown Seaweeds)/**Part 4.** Rhodophyceae (Red Seaweeds)/References/Index.

Audience – Botany & Aquaculture.

Concepts of Medicinal Botany



Anamika Singh
Mani Singh

ISBN: 978-93-90620-52-4/Year 2022
Size: 16 cm × 24 cm/Pages 234
Paperback/₹ 325.00

The primary objective of this book is to provide history and scientific footage to medicinal plants. Plants have been used as medicine from prehistoric days. Even today, according to World Health Organization approximately 25% of the modern medicines used in the United States are derived from plants.

Concepts of Medicinal Botany covers a wide range of medicinal knowledge of plants — from Ayurveda to different systems of medicine like Siddha and Unani. This book covers use of herbal medicines, conservation of medicinal plants, propagation, nursery management, ethnobotany and many more. It also gives detailed information about the plant parts used as medicines and their key phytochemicals.

This book will be indispensable for graduate students as well as for those preparing for UPSC and PCS exams (Mains). Researchers working in the field of Medicinal Botany may find this book as an important stepping stone. This book covers newly added skill based CBCS syllabus at graduate level. Based on practical approaches, the book has been written in easy to grasp manner that will prove to be one stop shop for various needs.

Contents:

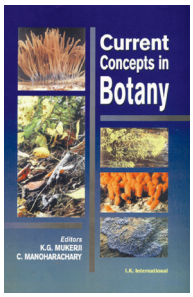
Plant as Medicine/Ayurveda/Siddha/Unani/Conservation of medicinal plants/Different Approaches to Conservation/Propagation of Medicinal Plants/Drug development stages/Application of plant products/Institutions, Quality Control and Regulations/Index

Audience – B.Sc (Botany)/M.Sc (Botany)

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Current Concepts in Botany



K.G. Mukerji • C. Manoharachary

ISBN: 978-81-88237-64-7/Year 2006
Size 18 cm × 25 cm/Pages 514
Hardback/₹ 1995.00

In the recent years significant number of advances have been made in all aspects of plant sciences and to bring the widely different aspects under one cover is indeed a herculean albeit subjective task. That is precisely what the effort of the editors has been in compiling *Current Concepts in Botany*, which is a collection of review articles as well as original research papers from contemporary fellow botanists from all over the world.

This volume contains 30 authoritative and thought provoking articles of both applied and fundamental value written by leading scientists in the area of their specialization. The objective in developing this volume was to offer a detailed overview of the applied aspects of Botany in terms of its theoretical, methodological and empirical contributions. Interdisciplinary aspects of the subject have been emphasized in the present volume.

Contents:

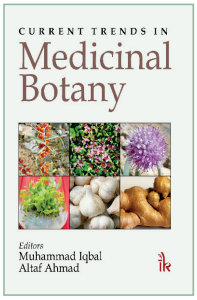
Preservation of Biodiversity of Fungi Herbarium: Specimens and Culture Collection/Trichomycetes: Forgotten Fungi/The Laboulbeniales (Ascomycetes): Distribution and Host Parasite Relationships/Arbuscular Mycorrhizal Fungal Taxonomy/ Pathological and Taxonomical Aspects of the Genus Drechslera/ Evaluation and Classificatory Systems in Smut Fungi/Pleurotus: A Mushroom of Commerce and Broad Adaptability/Wood-rotting Fungi of Temperate Himalayas/Studies on the growth forms of Bryophytes in relation to habitat conditions/An Overview of the forest Types and Associated Spermatophytic Vegetation of Chamba District Himachal Pradesh/Ecological Prospects of garoforestry systems in Ethno-medicobotany of Tribal Areas in Himachal Pradesh/Soil Microbial Diversity in relation to Chemical Transformation and Biotic Interactions/Role of Endophytic Nitrogen-Fixing Bacteria in Crop Production/Arbuscular Mycorrhizal Associations in Agricultural Plants including Weeds/Integration of Arbuscular Mycorrhizal Fungi with Micropropagated Forest Trees/Effect of Dual Inoculation of AM Fungi and Bradyrhizobium Japonicum on Nodulation and Nitrogen Content in Soybean/Microbial Degradation of Hazardous Dyes/ Composting Technology: Signficance and Potential/Seed Mycoflora and Aflatoxin Containation in Mustard during Storage/Air and Soil-transmitted Fungal Pathogens of Onion: Diseases Caused and Control/Allelochemicals: The Possibility of Management of Plant diseases/Developments in production, characteristics and Potential applications of Yeast Phytases/Insights into Mode of Action of Insecticidal Proteins of Bacillus thuringiensis /Enhancement of Wheat Performance with Plant Growth Promoting Bacteria in different Soils/Phytoermediation: A cost-effective Approach for the Removal of Soil Contaminants/Genetically Modified Cotton and its Biosafety concerns: A Review/Phase Change in Plants: Some Aspects/Introduction of Glycinebetaine Pathway through Genetic Engineering Enhances Potential of Plants to withstand Abiotic Stress/Index.

Audience – Life Science (Botany, Microbiology, Plant Pathology, Seed Science, Plant Genetic & Environmental biology).

Current Trends in Medicinal Botany

Editors

Muhammad Iqbal
Altaf Ahmad



ISBN: 978-93-82332-50-3/Year 2014
Size 18 cm × 24 cm/Pages 418
Hardback/₹ 2995.00

Man has been using plants for healing purposes since time immemorial. All ancient civilizations have referred to medicinal plants, but the knowledge on medicinal plants has accumulated fast over the last few centuries. In the past few decades, plant scientists and chemists have put in a great deal of interest and efforts to identify the active ingredients of traditional or folk herbal medicines as therapeutic agents.

This book is an attempt to bring together the diverse research trends currently operative in the field of medicinal botany all over the globe. This book elucidates the varied facets of the current medicinal plant research. Beginning with the core study of distribution patterns of medicinal plants, it covers the wide range of chemical evaluation of their therapeutic properties, unravels the impact of environmental stresses on medicinal plants and their active ingredients, and highlights the modern investigations aiming at molecular authentication and quality assessment of medicinal plants, in vitro propagation of these plants for enhanced production of bioactive metabolites, and the metabolomic approach for metabolic fingerprinting and identification of new active compounds.

This book must prove to be a great source of information on recent research trends in medicinal botany and phytochemistry, catering to the need of students and researches keen on medicinal plants and stimulating a general interest for the study of medicinal plants with a proper understanding of the associated cultural, environmental and scientific scenario, as they cannot be studied, evaluated and utilized fully and properly in isolation, and need to be looked at in a global perspective.

Contents:

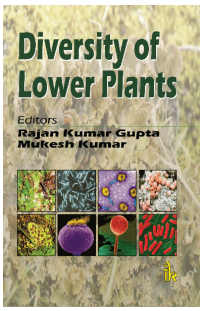
Traditional herbal therapy in the Kashmir Himalaya/Medicinal plants of tehsil Spiti of Himachal Pradesh and their therapeutic utility/Status of the medicinal and aromatic plant research in Albania/Scientific evaluation of traditional herbal treatment for diabetes in jordan/Potential botanicals for the treatment of breast cancer: pharmaceuticals approaches used to increase the absorption of herbal drugs/Biodiversity, bioprospecting, IPR and benefit sharing with stakeholders in the 21st century India/Herbal medicines interactions/Pharmacognostical evaluation of plant drugs with special emphasis on chromatography: *Adhatoda vasica* leaves/ Role of mineral nutrients and plant growth regulators in cultivation of some essential oil-bearing medicinal plants/Response of tansy to environmental degradation/Therapeutic utility of malaysian rice/Microbial transformation of phenyl propanoid compounds to vanillin/Cyanobacteria: a rich source of novel biomolecules for drug discovery/Tissue culture technology in conservation and propagation of medicinal plants/Amplified fragment length polymorphism: a useful and versatile technique for medicinal plant research/Molecular biology techniques for authentication of medicinal plants/Medicinal plant metabolomes: converging botany and chemistry into health opportunity/Peptides: an emerging source of drugs/medicines/Use of radiomutagenesis for obtaining alkaloid-rich plant mutants.

Audience – Postgraduate and research scholars in medicinal botany and phytochemistry.

Diversity of Lower Plants

Editors

Mukesh Kumar
Rajan Kumar Gupta



ISBN: 978-93-82332-41-1/Year 2014
Size 18 cm × 24 cm/Pages 360
Hardback/₹ 2995.00

Biodiversity is the variation of life forms within a given ecosystem, biome or for the entire earth. Biodiversity is often used as a measure of the health of biological system. Biodiversity or biological diversity is the sum of all the different species of animals, plants, fungi, and microbial organisms living on earth and the variety of habitats in which they live. Scientists estimate that upwards of 10 million—and some suggest more than 100 million—different species inhabit the earth. Each species is adapted to

its unique niche in the environment, from the peaks of mountains to the depth of deep-sea, hydrothermal vents, and from polar ice caps to tropical rain forests.

Biodiversity is also described as some of the fascinating varieties of organisms and complex ecological relationships that give the biosphere its unique, productive characteristics. The biodiversity found in earth consists of many millions of distinct biological species. Biodiversity is not distributed evenly on earth, but is consistently rich in the tropics and in specific localized regions it is less rich in polar regions where fewer species are found. Humans and most other animals are almost totally dependent on plants, directly or indirectly, as a source of energy through their ability to convert the sun's energy through photosynthesis.

The algae, fungi, mosses, lichens and liverworts, collectively known as lower plants, are the unsung heroes of natural history. Lower plants are at the heart of our life support system." "Without lower plants, the rest of the living world couldn't function. We have left their existence to chance in the past but we now have to take positive action to conserve their immense diversity."

Keeping in mind the above thought the present book has book compiled which consists of wide ranging 26 articles encompass topics which emphasizes on various aspects of diversity of algae, cyanobacteria, bacteria, pathogenic bacteria, fungi, lichens, bryophyte, pteridophte, etc. The information incorporated in the book is provided by the authors who are internationally acknowledged experts in their field. The book has been written with the intention of providing a sufficient depth of the subject to satisfy the needs at a level which will be comprehensive and interesting. We have tried to synthesize all the information which will be useful to the students, teachers, scientists and researchers in the field of biodiversity of lower plants.

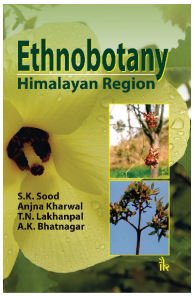
Contents:

Biodiversity: Distribution, Conservation and Economic Importance/ Microbial Diversity for Sustainable Crop Production in Hill Region/ Cyanobacterial Biodiversity: A Profile/Freshwater Cyanobacterial Diversity of Doon Valley/Physico-Chemical Parameters in Relation to the Distributional Pattern of Cyanobacteria/Extremophilic Bacteria and Microbial Biodiversity/Pathogen Biodiversity: Its Origen, Nature, Charectarization and Control/Diversity of Wood Rotting Basidiomycetes of Kumaon and Garhwal/Cyanobacterial Biodiversity and Ecostrategy/Biodiversity of Chilika Lake, East Coast of India/ Strategies for Sustainable Biodiversity Conservation/Diversity of Phytocystatins: The New Age Healers/Aquatic Diversity: Nature and Characterization/Threats to Phytodiversity/Himalayan Biodiversity with Reference to Uttarakhand and its/Intellectual Property Rights (IPR): An Effective Tool to Protect Indigenous Technical Knowledge/ An Updated List of Pteridophytes of Uttarakhand/Biodiversity of Powdery Mildew Fungus: A Constant Threat to Cucurbits/The Role of Cyanobacterial Biodiversity Resources in Agricultural Sustainability/ Algae: General Aspects, Ecological Relationships and Economic Values/Distribution Pattern of Terricolous Lichens in Garhwal Himalayas (Chopta-Tungnath Tract) with Reference to Morphological and Environmental Variables/Bryophytes and Ecosystem/ Biodiversity and Conservation Needs in Uttarakhand Himalaya: A Case Study of District Rudraprayag/Diatom: Occurrence, Structure and Application/Biodiversity and Biotechnology/Mycorrhiza: A Symbiotic Fungi/Index

Audience – Students, teachers, scientists and researchers in the field of biodiversity of lower plants.

Ethnobotany

Himalayan Region



S.K. Sood • Anjna Kharwal
T.N. Lakhanpal • A.K. Bhatnagar

ISBN: 978-93-82332-37-4/Year 2014
Size 16 cm × 24 cm/Pages 640
Hardback/₹ 3295.00

Salient Features:

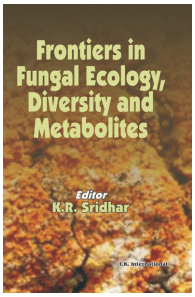
- First-ever comprehensive ready-reckoner of its type providing up-to-date information on multifaceted uses of promising 335 Himalayan plants.
- Information based on actual field surveys.
- Economic valuation of the source flora.
- Native Status and Availability of the Plant Resources.
- Neutraceutical Analysis of Some Underutilized Edibles.
- Text illustrated with 55 colour plates, 42 tables and 25 figures.
- Five user friendly appendices.

Contents:

I. **Introduction** (Ethnobotany – A Multidisciplinary Natural Science, Indigenous Societies, The Himachal Himalayas – Land of Ethnic Communities, Current Status of Work on Ethnobotanical Spectrum of Indian Flora, The Study Area and Enumeration); II. Promising Himalayan Plants for Sustenance of Mankind; III. Epilogue (Ethnobotanical Spectrum, Observed Density and Availability of Underutilized Plant Resources, Neutraceutical Potential of Some Himalayan Edibles, Native Status of the Ethnobotanical Flora, Economic Valuation of the Source Flora, Conclusion); IV. Literature Cited; V. Plates; VI. Appendices (Index of Families – Appendix I; Index of Uses – Appendix II; Index of Plants Used for Various Edible Preparations – Appendix III; Index of Plants with Additional Uses – Appendix IV, Index of Local Names – Appendix V, Index of Botanical Names — Appendix VI).

Audience – Postgraduate students, teachers, scientists and researchers dealing with Basic and Applied Botany, Ethnobotany; Pharmacists, Pharmaceutical Houses, Medical Practitioners, Biotechnologists, Corporate Houses, Plant Genetic Research Institutions, Conservationists, Government Departments dealing with Forestry, Social Forestry and the Cultivation of Medicinal Plants, Policy Planners, Laymen as well as essential for scientific and University libraries.

Frontiers in Fungal Ecology, Diversity and Metabolites



Editor

K.R. Sridhar

ISBN: 978-81-89866-91-4/Year 2009
Size 16 cm × 24 cm/Pages 352
Hardback/₹ 1195.00

Mycology is a frontier area of research in life sciences. Fungi represent one of the three major evolutionary segments along with plants and animals. Fungal multidimensional features with basic and applied value projected their potential beyond routine systematics, diversity and environmental studies. In view of tremendous developments in the field of Mycology, the present treatise emphasizes various aspects of contemporary issues in mycology. It comprises 22 chapters with emphasis on the fungal ecology, diversity and metabolites. The topics treated include aquatic ecology, diversity and phylogeny, mutualism and interactions, potential metabolites, pathology and toxins, fungal Infections and prevention, cell permeabilization and advances in monocarboxylate transporters in yeasts with an emphasis on cancer therapy. This volume is of special interest to mycologists as a valuable source of information on the frontier areas of mycology dealing with diversity, ecological amplitudes, methods of assessment, novel metabolites and bioprospecting avenues.

Contents:

Freshwater Hyphomycetes/Diversity of Aquatic Hyphomycetes of the Western Ghat Rivers/Mangrove Fungi of the Indian Peninsula/ Marine Fungi and Novel Metabolites/Trichomycetes/Forest Pathology in India/Diversity and Adaptive Response of Lichens in Antarctica/Diversity of Arbuscular Mycorrhizal Fungi of Endemic Myristicaceae/Arbuscular Mycorrhizal Fungi of the 'Khazan Land' Agro-Ecosystem/Arbuscular Mycorrhizal Fungi and Salinity Stress in Crop Plants/Production of Indole Acetic Acid by Ectomycorrhizal Fungi/Endophytic Fungi : Mutualism, Bioactive Metabolites and Bioprospecting/Identity and Toxigenic Potentiality of *Fusarium* spp. Colonizing *Sorghum*/Fumonisins – A New Class of Fusarial Mycotoxins/Improvement of Coffee Quality through Prevention of Moulds/Fungal Infections in Humans/Plasma Membrane Transport

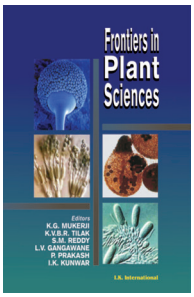
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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of Monocarboxylates in Yeasts/Cell Permeabilization–An Approach to Increase the Biocatalysis in Yeasts/Molecular Approaches in Mycology Based on Polymerase Chain Reaction/Phylogenetic Tools for the Identification of Fungi/Bioactive Peptaibol Antibiotics from *Trichoderma*/Emerging Issues in Mycology/Index.

Audience – Postgraduate and Research students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology.

Frontiers in Plant Sciences



Editors

K.G. Mukerji • K.V.B.R. Tilak
S.M. Reddy • L.V. Gangawane
P. Prakash • I.K. Kunwar

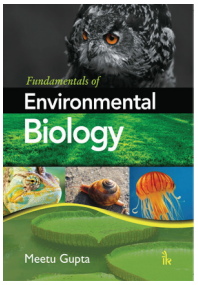
ISBN: 978-81-88237-42-5/Year 2005
Size 16 cm × 25 cm/Pages 892
Hardback/₹ 2250.00

During the recent years great advances have been made in nearly all fields of plant sciences. *Frontiers in Plant Sciences* is an attempt to bring all these widely different aspects together in one volume. The present volume contains wide-ranging articles on Taxonomy of Fungi, Microbial Ecology and Applied Microbiology (including aerobiology, mycorrhizae, soil rhizosphere, microflora and biological control of plant diseases).

Algae, an aquatic angiosperm, have also been given the due space. Comprehensive and concise, it offers a detailed overview of applied aspects of Botany in terms of its theoretical, methodological and empirical contribution. With emphasis on interdisciplinary aspects, it highlights recent prospective linkages among diverse research paradigms.

Audience – Postgraduate and Research students in Plant Sciences.

Fundamentals of Environmental Biology



Meetu Gupta

ISBN: 978-93-85909-87-0/Year 2018
Size 18 cm × 24 cm/Pages 238
Paperback/₹ 395.00

Fundamentals of Environmental Biology has been conceived to bring different aspects of environmental biology under one head. The purpose of this book is to fill the gap between basic books of ecology or environmental science and advanced environmental biotechnology in an appropriate manner. Divided in two parts, the book contains fourteen chapters. The first part deals with the topics related with ecology and environmental sciences and the second part deals with environmental biotechnology aspects.

It will help the students of botany, zoology, biotechnology, and environmental sciences or engineering, as environmental biology is a multidisciplinary subject and involves various issues like ecological issues, global environmental problems, socio-economic scenario along with modern fields such as molecular ecology, etc. Although the book is primarily designed for undergraduate and postgraduate students, it also provides information in a precise way to the teachers, researchers and also to the people working in NGOs related to environmental aspects or problems.

Salient Features:

- Basic and advance concepts of ecology and environmental science.
- Origin of various pollutants and their impact.
- Mitigation of environmental problems using modern biotechnology approaches.
- Introduction of new areas: molecular ecology, green technology, system concept in ecology.
- Coverage of new and related topics: phytogeography, major environmental movements in India, geography information system and remote sensing, xenobiotics, and sustainable development.

Contents:

Part I Ecology and environmental science

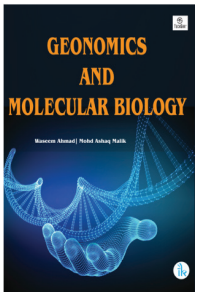
Ecosystem: structure and function/Population and community ecology/Soil dynamics/System concepts in ecology/Statistical ecology/Environmental act and rule

Part II Environmental biotechnology

Environmental pollution and monitoring/Sewage treatment/Bioremediation/Biofuels/Molecular ecology/Green technology/Biodiversity/Case studies/List of practical work and fieldwork

Audience – Undergraduate and postgraduate students in environmental science, ecology, botany, zoology, biotechnology and other life sciences.

Genomics and Molecular Biology



Dr Waseem Ahmad
Dr Mohd Ashaq

ISBN: 978-93-90620-64-7/2023
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

The field of molecular biology studies macromolecules and the macromolecular mechanisms in living things, such as the molecular nature of the gene and its mechanisms of gene replication, mutation, and expression. So as the genetics and genomics have an important role in modern medical and clinical practice.

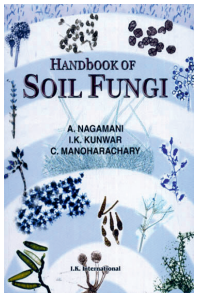
The text embodies expanded information and findings of life science merging with genomics and diseases in a holistic approach. A seminal presentation of superlative topics is divided into four sections starting with Mendelian Inheritance; The multiple Alleles; The Inheritance of Human Blood group; The Cytoplasmic Inheritance;Determination of Sex and Sex Differentiation, and Sex-Linked Inheritance. Section two deals with Cell Reproduction; The Cell Cycle; Apoptosis: The Programmed Cell Death; The Nucleus and Chromosomes. Section three is about DNA Structure, its Replication and Repair besides chemical Composition and Ultra Structure of Chromatin Fiber; Replication Fidelity, Mutation and DNA Repair, and Transposable Genetic Element also part of this. The text is further enriched by outlining the protein synthesis and recent advances in recombinant DNA and biotechnology in the last section. Three key features; Genomics, Proteomics and Recombinant DNA technology are mainstay, discussed in disease cure.

Salient Features

- Three key features; Genomics, Proteomics and Recombinant DNA Technology and mainstay discussed in disease cure.
- Expanded information and recent findings and disciplines of life science.
- Novel approaches to biotechnology and recent innovative areas.
- Recent researches in an updated manner.

Audience: Undergraduate and postgraduate students of Botany.
Shelving: Botany

Handbook of Soil Fungi



A. Nagamani • I.K. Kunwar
C. Manoharachary

ISBN: 978-81-88237-71-5/Year 2006
Size 18 cm × 25 cm/Pages 496
Hardback/₹ 2495.00

A number of biotechnologically, industrially and environmentally important fungal

organisms are found in the soil. Most studies on soil fungi deal with the quantification of fungi while only a few are available on their identification and description. In this handbook, the authors have provided an exhaustive account of the description of 317 species of soil fungi belonging to 122 genera.

All the species and genera are arranged alphabetically with related synonyms and special emphasis has been given to the keys to the species, genera, families, orders and related classification for easy identification.

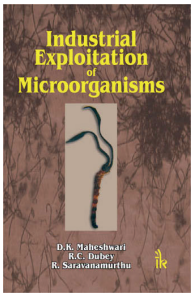
Handbook of Soil Fungi will be an important contribution to mycofloristics. It will serve as a guide to experts as well as beginners in the study of soil fungi and their enumeration and identification. The detailed laboratory methods dealing with isolation, cultivation, culture media, preservation, slide preparation and ecological distribution of fungal species from various soils, and the glossary provided will serve as a complete manual. The morphological details of the fungal species, coupled with photomicrographs and camera lucida diagrams, are a special feature of this book. The present book is the first detailed monograph on soil fungi from the Indian subcontinent.

Contents:

Introduction / Materials and Methods / Fungi reported from various soils of Andhra Pradesh / Classification of Fungi / Key to Genera / Descriptions of Fungi / Glossary / Bibliography / Index.

Audience – Soil Science, Biotechnology, Mycology students.

Industrial Exploitation of Microorganisms



Editors

D.K. Maheshwari • R.C. Dubey
R. Saravanamuthu

ISBN: 978-93-80026-53-4/Year 2010
Size 18 cm × 24 cm/Pages 448
Hardback/₹ 1595.00

This book embodies 21 review articles contributed by subject experts of various areas of industrial microbiology. The articles are devoted to pharma industries, food and enzyme industries, textile industry, agro-industry and cottage industry.

Yeast is one of the important microorganisms which have been used to produce beverages, alcohols and fermented food commodities for a very long time. In recent years, it has been the first choice among eukaryotes to use in recombinant technology. Yeast and Spirulina are being used and marketed as Single Cell Protein (SCP). Mushrooms have been used by humans down the ages. In addition to a rich source of mycoprotein, they have medicinal values also against many ailments. Number of bioactive novel compounds is increasing with the discovery of microbial species and newer groups of microorganisms.

Some chapters are devoted to microbial bioinoculants used as biofertilizers because they are rich source of nitrogen and phosphorus for both legumes and non-legumes. They are being manufactured and sold in market with different trade names. In addition, several microbial enzymes have been produced and commercialized by various industries, but highly active and potential enzymes produced through recombinant DNA technology hold much importance. For example, microbial proteases find application in detergent leather, food and pharma industries and provide eco-friendly technology for bioremediation. Laccase has been worked out to be a good tool for bioremediation of non-degradable wastes and xenobiotic chemicals. Besides, laccase-based biosensors have also been constructed which can be used for phenol determination, monitoring of lignin and plant flavonoids.

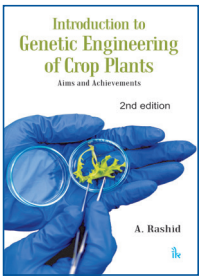
Various microbial phytases as feed supplemented have been used in freshwater and marine aquaculture for improving the growth performance of fishes. Nowadays aquaculture is growing rapidly to meet increasing food demand throughout the world for high quality fish. More than 16,000 bioactive compounds have been isolated from actinomycetes alone including antibiotics, enzymes, vitamins, amino acids, siderophores and nanoparticles. Biosynthesis of nanoparticles by bacteria, actinomycetes and algae has been reported and work is being done nationally and internationally.

Contents:

Biotechnological Potential and Industrial Application of Yeast/Probiotics Microorganisms/Spirulina: Its Role in Food Industry/ Microbial Biopesticides/Biotechnological Potentials of Cyanobacteria and their Industrial Applications/ Biotechnological Potentialities of Higher Fungi/Cordyceps sinensis (Yarha gamboo): A High Value Medicinal Mushroom/ Biotechnological Application in Textile Industry Antimicrobial Textiles/Applications of Streptomyces sp. in Pharmaceutical Industry/Microbial Proteases and their Applications/Proteases: Significance and Applications/ Electrocatalytically Active Laccases: Application for Biosensor Development/Potential Applications of Microbial Phytases in Aquaculture/Laccase Regulation and Laccase-Dependent Bioremediation/Biotechnological, Genetic Engineering and Nanotechnological Potential of Actinomycetes/Strategic Synthesis of Nanoparticles by Mycetes/Discovery of Bioactive Molecules from Plants and Microorganisms/Agro-industrial Bioprocessing of Tropical Root and Tuber Crops–Current Research and Future Prospects/Pharma-active Compounds of Microbial Origin and their Diversity/Industrially Useful Microbial Bioresources/ Antimicrobial Properties of Essential Oils and their Potential Applications in Pharmaceutical Industries/Index.

Audience – Students & research scholars of Botany and Agriculture.

Introduction to Genetic Engineering of Crop Plants Aims and Achievements



Second Edition

A. Rashid

ISBN: 978-93-86768-44-5/Year 2019
Size: 16 cm × 24 cm/Pages 324
Paperback/₹ 525.00

Since the publication of the first edition of this book in 2009, a lot of crucial information has surfaced with the help of recent researches the world over. Hence, the need to revise the original edition. This new edition has been duly updated and thoroughly revised..

New Features:

- First and last chapters after fortification of new information have become thought provoking.
- Two new chapters "Genetic Engineering by Agrobacterium rhizogenes (A Novel Approach in Genetic Engineering of Plants)" and "Terminator Gene Technology (A Betrayal to Genetic Engineering of Crops)" are self-explanatory.
- Sweet potato is the first Agrobacterium-mediated genetic engineered crop in Nature.
- Two chapters carved out, of old and bulky ones, make the book more student- friendly.
- Every chapter has been updated, with the new information available.
- "Conclusion", cultivation of transgenic crops world-wide, vis-avis India is a new section of the present edition.

Transgene technology since its inception, about three decades ago, has progressed rapidly providing platform for discovery and design of novel plants which are improved source of food, feed, chemicals and drugs. This knowledge is changing rapidly by which plants develop their architecture to survive abiotic and biotic stresses, and become resistant to herbicides, pests and pathogens. Hence, the scene is set for a change from traditional farming to molecular farming. Moreover, gene silencing from a bane has turned out to be a boon, opening new

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vistas in genetic engineering of crop plants. In this book one will find an up-to-date account of aims and achievements of genetic engineering of crop plants. This book is an essential reading for the undergraduate and postgraduate students of Botany, Biotechnology and Agriculture.

Contents:

Genetic Engineering: Science and Technology/Agrobacterium tumefaciens Genetic Engineer in Nature (Genetic Engineering: A Copy Nature Approach)/Genetic Engineering by Agrobacterium rhizogenes (A Novel Approach in Genetic Engineering of Plants)/ Direct Delivery of DNA for Transformation/Engineering for Herbicide Resistance/Engineering Resistance to Pests/Engineering Resistance to Pathogens/Engineering for Stress Tolerance/Engineering of Primary Metabolism/Engineering of Secondary Metabolism/Molecular Farming/Engineering of Plant Development and Differentiation/ Gene Silencing: From Bane to Boon/Terminator Gene Technology (A Betrayal to Genetic Engineering of Crops)/Conclusion/Index

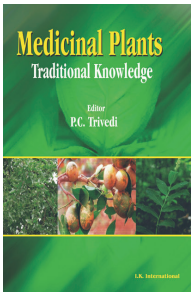
Audience – Undergraduate and Postgraduate students of Botany, Biotechnology and Agriculture

Medicinal Plants

Traditional Knowledge

Editor

P.C. Trivedi



ISBN: 978-81-88237-62-3/Year 2006
Size 18 cm × 25 cm/Pages 272
Hardback/₹ 995.00

Nearly all cultures, from ancient times, have used plants as a source of medicine. Initially, these formed the bulk of folk or ethnomedicine, practiced in India and some other parts of the world. A considerable part of this indigenous knowledge was documented and passed into the organized system of medicine. Nowadays even the developed countries are turning to herbal remedies. Besides, modern scientific medicine also depends on plants for some essential drugs.

The present book is a comprehensive review of significant investigations on traditional medicinal plants. It contains 17 chapters covering information on medicinal plants and their varied aspects like uses, commercial potential and standardization of herbal formulations etc. The book also provides an account of traditional medicinal plants and their prospective applications in the present scenario.

It would serve as a useful reference for botanists, phytochemists, pharmacologists, phytogeographers, conservationists and those related to the pharmaceutical industry.

Contents:

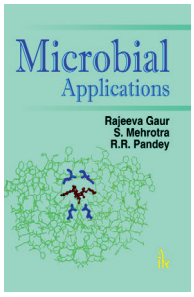
Herbal formulations and their standardization/*Gymnema sylvestre*: A wonderful anti-diabetic drug/Mosquito larvicidal activity of essential oils of some medicinal plants against *Aedes albopictus* (Skuse)/Some medicinally important leguminous plants of Kumaon Himalayas/ *Lawsonia inermis* Linn. A review/Herbal remedies to antibacterial therapy: Its status in the 21st century/Evaluation of antilithiatic activity of *Hibiscus subdariffa* Linn/Indian medicinal plants: *Ficus bengalensis* Linn, *Salacia oblonga*, and *Allium* as possible sources of antidiabetic, anti-oxidant and hypolipidemic principles/Ethno-medico-botany of some sacred plants of Dhemaji district of Assam/Commercial use of medicinal plants and traditional knowledge in India/Medicinal plants as potential anti-diabetics: A review/Traditional wisdom of plants in pest control in agriculture/Medicinal plants of Hadoti Plateau (Rajasthan): Uses and conservation/Plants of medicinal and ethno-botanical importance in West Bengal: An overview/Anti-toxic effect of the subterranean termite *Odontotermes formosanus* Shiraki (Insecta: Isoptera) used in the South Indian folk medicine/Use of indigenous herbal medicinal plants by Gond traditional healers to cure skin diseases in the Bastar Region of Chhattisgarh/Some sacred trees and their medicinal uses.

Audience – Students and Research Scholars of Applied Medicine, Medicine and Agricaltural Science.

Microbial Applications

Editors

Rajeeva Gaur • S. Mehrotra
R. R. Pandey



ISBN: 978-93-81141-01-4/Year 2012
Size 18 cm × 24 cm/Pages 388
Hardback/₹ 1595.00

Increasing importance of the subjects like Microbiology, Biochemistry, Biotechnology and Environmental Science envisages elaborate and consolidated information on these modern disciplines of science. There is an urgent need to integrate all these disciplines to devise a truly interdis-ciplinary branch of science that caters to the need of all those who are genuinely interested to solve the multifaceted problems faced by the mankind. Therefore, this book is a step forward in the direction of integrating the aforesaid frontline branches into an interdisciplinary course quenching the academic thirst of all those concerned.

Microbial Applications aims to provide information to both undergraduate and postgraduate students studying in various fields of Life Sciences. Though an edited book it has been designed in such a way that even beginners in the field, who are not well acquainted with the problems mentioned in the individual chapters, can also easily grasp the subject.

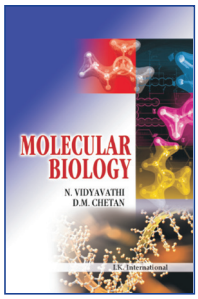
This book includes twenty-two chapters related to applications and deleterious aspects of microorganisms including utility of A. pullulans in industry, symbiotic nitrogen fixation, microbial enzymes, probiotics, microbes in heavy metal remediation, immunosensor, role of bioinformatics in microbiology, biofertilizers, and microbes as source of plant growth promoting factors etc. Each chapter provides introductory description on the topic followed by a detailed account. All the topics covered in the book are dealt with sound scientific footing. Different chapters were invited from specialists in the concerned disciplines. It is expected that this will cater to the needs of science students.

Contents:

Biology, distribution and utility of Aureobasidium pullulans/ Microbial laccases: Occurrence, properties and applications/Bacterial protease inhibitors/Exploitation of microbes and microbiols in pest management: Current status and future prospects/Microbial interactions and control of bacteria and phytopathogenic fungi/ Probiotics: Role in fodder technology/Structure and function of HIV/ GMM food: Problems and perspectives/Role of fungi in production of ergot alkaloid/Role of bioinformatics in microbial studies/Microbes for heavy metal remediation/Microbial degradation of pesticides/ Microbial degradation of sulfide in aerobic and anaerobic conditions/ Bioinformatics in microbiology: An introduction/Biofertilizers and plant growth promoting rhizobacteria./Biosensors: A real time analytical tool/Immunosensor: A new strategy in detection and analysis of biomolecules/Bacterial resistance in mercury and its bioremediation in contaminated environment/Role of phosphate solubilizing microorganisms in agriculture/Microorganisms for improving productivity and quality in horticultural crops/Studies in Rhizobium association with Sesbania species: an important green manure crop/ Applications of microorganisms in nanotechnology/Index.

Audience – Undergraduate and postgraduate students of Life Sciences.

Molecular Biology



N. Vidyavathi • D.M. Chetan

ISBN: 978-81-89866-35-8/Year 2007
Size 14 cm × 21.5 cm/Pages 196
Paperback/₹ 315.00

Covering Molecular Biology from the basics to complex molecular processes and genetic phenomenon followed in both prokaryotic and eukaryotic cells, this book has been significantly structured into thirteen chapters.

Textbook of Molecular Biology is an invaluable Companion for undergraduates and postgraduates throughout their studies.

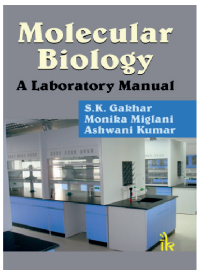
The present Pioneering textbook emphasizes on the structural details of DNA and its replication with a detailed account on the enzymes involved in the process. A comprehensive account on the understanding of protein synthesis in prokaryotes and eukaryotes has been included. Processing of mRNA, transposons and expression of genes in both prokaryotes and eukaryotes have been discussed in detail with visual understanding. Glossary has been included in appendix for easy reference purposes.

Contents:

Introduction to Molecular Biology/Central Dogma/Genetic Code/ Structure and Forms of Nucleic Acid/Transcription/Protein Synthesis or Translation/Control of Gene Expression in Prokaryotes/ Transposons/Recombination/DNA Damage and Repair/Mutations/ Retrovirus/Retroposons/Glossary/Index.

Audience – Graduate and Postgraduate students of all streams of Life Sciences.

Molecular Biology
A Laboratory Manual



S.K. Gakhar • Monika Miglani
Ashwani Kumar

ISBN: 978-93-82332-30-5/Year 2014
Size 16 cm × 24 cm/Pages 128
Paperback/₹ 295.00

The field of molecular biology continues to be the most exciting and dynamic area of science and is predicted to dominate the 21st century. Only at the molecular level, it is possible to understand various biological processes in detail. Such understanding is vital for advances in medicine, and the pharmaceutical industry that produces new drugs and thus cure is greatly dependent upon molecular biology. Molecular biology also contributes to our understanding of what human beings are and how they fit into this universe.

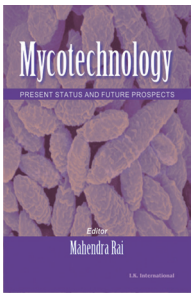
The objective of this manual is to train young teachers from colleges and research institutions so that methodologies could be used by them in their research in various fields of biology. This would also help all the beginners and students at B.Sc. & M.Sc. level to learn the various techniques on molecular biology. This book contains four chapters giving the step-wise protocols for various practicals. In addition, it has general instructions for safety procedures, viz., biosafety, radiation safety, hazardous chemicals, personal protection and also the preparation of various stock and working solutions for molecular biology practicals.

Contents:

Nucleic Acids/Proteins/Bioinformatics/General Laboratory Instructions/Cautions/Appendix/Index

Audience – Student B.Sc. & M.Sc. students of Molecular Biology & Biotechnology.

Mycotechnology
Present Status and Future Prospects



Editor

Mahendra Rai

ISBN: 978-81-89866-08-2/Year 2007
Size 18 cm × 25 cm/Pages 318
Hardback/₹ 1995.00

Mycotechnology has a crucial role to play in the 21st century. Fungi are bioprotectors, bioremediators, bio-fertilizers, drug-producers and involved in everyday life. *Mycotechnology: Present Status and Future Prospects* includes current and rare topics on mycotechnology, such as, molecular techniques (for analysis of soil fungi, diagnosis of ochratoxin-A producing fungi, identification of ectomycorrhizal fungi), SPPADBASE, bioactive sesquiterpenes, mycological applications of Raman spectroscopy, etc.

Salient Features:

- Discusses latest developments in mycotechnology
- Provides new techniques and innovative ideas in fungal biotechnology
- Addresses molecular diagnosis of mycotoxins, soil microbes and ectomycorrhizal fungi
- Includes role of type culture collection in mycological research and applications, e.g. drug discovery from fungi
- Deals with the role of fungal chitinases
- Focuses on strategic role of AMF in agro-ecosystem and disease control
- Contains database of PCR primers for phyto-pathogenic fungi.

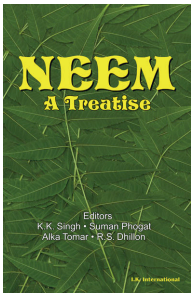
This book is essential reading for mycologists, biotechnologists, microbiologists, botanists, agronomists, physicists, biochemists.

Contents:

Molecular Methods for Analysis of Soil Fungi/Bioremediation of Aged Pentachlorophenol Residues by *Trametes* spp./Penicillin Biosynthesis and Secretion: Precursor and Enzyme Localization/ Current Trends in Molecular Diagnosis of Ochratoxin-A Producing Fungi/Fungal Chitinases An Overview on Regulation and Cloning/ Arbuscular Mycorrhizal Fungi in Agricultural Ecosystem/ Strategies for Control of Disease Caused by Different Species of Phytophthora using Arbuscular Mycorrhizal Fungi/Type Culture Collections in the Mycological Work: Maintenance and Control of Fungal Cultures/Molecular Methods for the Identification of Ectomycorrhizal Fungi/SPPADBASE: The First On-Line Searchable Database of PCR Primers for Phytopathogenic Fungi / Claviceps: A Biotechnologically Exploited Fungus/Chitin and Chitosan of Microbial Origin and their Utilization/Biodiversity and Biotechnological Potentials of Fungi from the Marine Environment/Aeromycological Aspects of Mycotechnology/Bioactive Sesquiterpenes Produced from Fungi: Possibilities and Limitations/Mycological Applications of Raman Spectroscopy/Index.

Audience – Postgraduate and Research Students, mycologists, biotechnologists, microbiologists, botanists, agronomists, physicists, biochemists.

Neem
A Treatise



Editors

K.K. Singh • Suman Phogat
R.S. Dhillon • Alka Tomar

ISBN 978-81-89866-00-6/Year 2009
Size 18 cm × 25 cm/Pages 566
Hardback/₹ 1995.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

The present edited volume *Neem – A Treatise* provides a comprehensive and authoritative account of this wonder tree — *Neem* (*Azadirachta indica* A. Juss). An excellent reference text, it offers a versatile and indepth account of occurrence, distribution, ethnobotany, uses in agroforestry, silviculture and social forestry, cultivation and improvement of neem, propagation by tissue culture, chemical constituents and their bioactivity against micro-flora and micro-fauna, disease, stored grain insect-pests, enhancing fertilizer use efficiency, neem in health and cosmetics, various therapeutic uses such as malaria and vector control, contraceptive, ancient veterinary medicines, uses of neem bark in dying cotton fabrics and steps for promoting neem and its cultivation.

Hopefully, this book will be very useful for researchers of various disciplines such as botany, forestry, chemistry, toxicology, agrochemicals, soil science, agronomy, entomology, plant pathology, medical and veterinary science and to the environmental conscious farmers of developed and developing countries.

The present book includes 37 chapters broadly divided in 8 sections contributed by eminent scientists working on different aspects of neem. An attempt has been made to present as many aspects as possible under the sections given below:

Contents:

Section I – Neem: Its Botany and Forestry:

Neem: An Introduction/Geographical Distribution, Ethnobotany and Indigenous Uses of Neem/Botany of Neem/Neem (*Azadirachta indica*) Based Agroforestry Systems/Silviculture of Neem and Its Role in Agroforestry and Social Forestry.

Section II – Cultivation and Improvement of Neem:

Techniques of Neem Plantation and Its Economic Benefits/ Molecular Markers : Challenges and Applications in Neem Improvement/ Sexual and Asexual Propagation in Neem and Selection for High Azadirachtin Content/Tissue Culture: An Indispensable Tool in Neem Improvement/Diseases of Neem – An Overview/Impact of Industrial Pollutants on Growth of Neem.

Section III – Chemical Constituents and Their Bioactivity:

Secretory Cells of Neem and *In Vitro* Production of Chemicals/ Chemical Wealth of *Azadirachta indica* (Neem)/Chemistry of Axadirachtin and other Bioactive Isoprenoids from Neem (*Axadiracha indica* A. Juss)/Synthesis and Biological Activity of Neem (*Azadirachta indica* A. Juss) Compounds.

Section IV – Bioactivity Against Microflora and Microfauna:

Bioassay Methods and Risk Assessment with Neem Based Pesticides/ Hormetic Action of Azadirachtin in an Insect System, Implication in Pest Management : A Case Study/Biological Effects of Neem/ Integration of Botanical and Microbial Pesticides for the Sustainable Management of Insect Pests/Role of Neem (*Azadirachta indica*) in the Management of Plant Diseases.

Section V – Bioactivity Against Insect-Pests:

Bioactivity of Neem Against Phytonematodes/Efficacy of Neem Cake Against Soil Nematodes, Fungi and Nematode Fungal Complex Diseases/Role and Scope of Neem Based Products in Cotton Pest Management/Recent Studies in the Management of Insect-Pests of Cotton/Neem as an Insecticide Against Aphid (Homoptera : Aphididiae)/Stored Grain Insect-Pests Management /Neem in Pest Management of Horticultural Crops.

Section VI – Enhance Fertilizer Use Efficiency:

Neem in Insect-Pests and Fertilizer Management/Role of Neem in Increasing Nitrogen Use Efficiency/Role of Neem in Fertilizer Industry.

Section VII – Contribution to Human and Veterinary Medicine:

Neem is Health and Cosmetics/Neem in Malaria and Vector Control/ Role of Neem Oil in Control of Vectors of Malaria, Filariasis and Dengue/Neem – A Broad Spectrum Contraceptive/Role of Neem in Ancient Veterinary Medicine.

Section VIII – Promoting Neem and its Cultivation:

Encouraging on-farm Neem Cultivation for Sustainable Livelihoods of Subsistence Farmers/Promoting Neem at the Global Level/ Index.

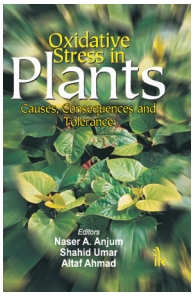
Audience – Researchers of various disciplines such as Botany, Forestry, Chemistry, Toxicology, Agrochemicals, Soil Science, Agronomy, Entomology, Plant Pathology, Medical and Veterinary Science.

Oxidative Stress in Plants

Causes, Consequences and Tolerence

Editors

Naser A. Anjum • Shahid Umar
Altaf Ahmad



ISBN: 978-93-81141-02-1/Year 2012
Size 18 cm × 24 cm/Pages 545
Hardback/₹ 2495.00

Oxidative stress is a central factor in a number of biotic and abiotic stress phenomena that occurs when there is a serious imbalance in any plant cell compartment between the production of reactive oxygen species (ROS) and antioxidant defense, leading to physiological and metabolic changes. The presence of high concentration of ROS in cells causes oxidative damage to photosynthetic functions and vital bio-molecules, and disrupt cellular metabolism. Thus, it is important for plant cells to have tight control on the concentration of ROS. Plants possess to a variable extent antioxidant metabolites, enzymes and non-enzymes that have the ability to detoxify ROS thus, to protect the photosynthetic- and cellular functions against ROS-caused oxidative stress and to maintain optimum growth, development and productivity under changing environment.

The current volume mainly elucidates major recent advances through physiological and molecular studies on the aspects of the causes, consequences of oxidative stress and also discusses and suggests potential strategies for enhancing tolerance to oxidative stress in detail in the light of the advances in molecular biology.

Contents:

An Introduction to Oxidative Stress in Plants and the Role of Non-Enzymatic Antioxidants/Environmental Factors Affecting Components of Ascorbate-Glutathione Pathway in Crop Plants/ Regulatory Role of Components of Ascorbate-Glutathione (AsA-GSH) Pathway in Plant Tolerance to Oxidative Stress/Ascorbate and Glutathione: Saviours Against Oxidative Stress/Ascorbate-Glutathione and Plant Tolerance to Various Abiotic Stresses/ Ascorbate-Glutathione Related Redox Regulation in Plant Stress Tolerance/Detoxification of Heavy Metal Induced Oxidative Stress in Plants – Enzymatic– and Non-Enzymatic Mechanisms—A Mini Review/Significance of Glutathione in Higher Plants for Combating Abiotic Stress-Effects/Heavy Metals and Oxidative Stress in Plants/ Ascorbate and Glutathione: A Defence System Against Heavy Metal Stress in Plants/Role of Ascorbate Peroxidase and Glutathione in Higher Plants to Abiotic-Induced Oxidative Stress/Defence Strategies of Plants Against UV-B-Induced Oxidative Stress/Role of Ascorbate-Glutathione During Salt Stress-Induced Oxidative Stress Tolerance in Plants/Secondary Metabolites as Non-Enzymatic Plant Protectors from Oxidative Stress/The Role of Ascorbate in Growth and Development of Cells During the Formation of Annual Rings in Coniferous Trees/Modulation of Glutathione, its Redox Couple and Related Enzymes in Plants Under Abiotic Stresses/Heavy Metals in Soil and Plants: An Overview of Arsenic, Cadmium, Chromium and Mercury/Index.

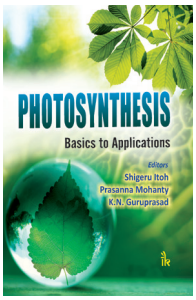
Audience – PG and Research Scholars in Agricultural Biotechnology & Plant Sciences.

Photosynthesis:

Basic to Applications

Second Edition

Editors



Shigeru Itoh • Prasanna Mohanty
K.N. Guruprasad

ISBN: 978-93-84588-54-0/Year 2015
Size 18 cm x 24 cm/Pages 308
Hardback/₹ 2225.00

This book contains selected overviews on several important aspects of photosynthesis, and provides both tutorial content and critical insight into the future of photosynthesis research. Photosynthesis has been a challenging scientific topic, which involves a complex biochemical and biophysical process. Deeper and greater understanding of this process holds a promise for a sustainable Earth, with a pollution-free environment necessitating advent of newer technologies for food and cleaner energy. There have been global efforts to mimic the photosynthetic process to meet the needs of the future. This book, with 19 articles, provides not only the basics of the process and its applications, but it also gives a glimpse of the recent progress and future perspective on photosynthesis.

Salient Features:

- High quality peer-reviewed articles, accompanied by in-text citation of milestone research, with full references at the end of each article.
- Contribution by sixty four eminent researchers and academicians from Asia, Europe, USA, Canada, and Russia.
- One of the rare unifying themes under photosynthesis research, which is "regulation of photosynthesis by various limiting/stress factors".
- State-of-the-art analytical techniques, well-laid-out results and findings, and pictures and diagrams (many in color).

With its unique coverage and emphasis, this book will be useful for not only researchers, but teachers and students as well. It can be used both as a reference as well as a text book for courses in Plant Biology, Environmental Biology, and Agriculture.

Contents:

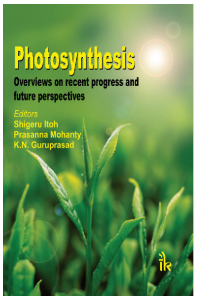
Dissecting oxygenic photosynthesis: the evolution of the "Z"-scheme for thylakoid reactions/Molecular architecture of photosynthetic apparatus/State shifts in photosynthetic organisms: tracking traits and techniques/Dissipation of excess absorbed energy by the photosynthetic apparatus of cyanobacteria/the functional sites of electron transfer cofactors in photosystem II studied by pulsed EPR/Delayed fluorescence of chlorophyll *d* and chlorophyll *a*; emission/Excitation spectra and activation energy in photosystem II of acaryochloris marina and *Synechocystis* sp. *PCC* 6803/Delayed fluorescence in a millisecond range – a probe for the donor side-induced photoinhibition in photosystem II/Redox control of leaf variegation and chloroplast biogenesis in arabidopsis thaliana/Transcriptional response to low-O_2 conditions in *Synechocystis* sp. strain PCC 6803 includes induction of a gene cluster containing *psbA* and *petC2*/Mutants of chlorophyllide oxygenase/A comprehensive study of the effects of nitrite anion on photosynthetic electron transport chain/Mitochondrial oxidative metabolism optimizes photosynthetic carbon assimilation through redox and ROS linked metabolite shuttles/Leaf senescence and abiotic stresses share chloroplast degradation, ROS involvement and transcription factors/Inactivation and repair of photosynthetic machinery under heat stress/Salinity tolerance strategies in mangroves: salt shock experiments for assessing stress-triggered effects during salt stress and post stress recovery in a true mangrove *bruguiera gymnorrhiza*/metal toxicity and photosynthesis/Effects of heavy metals on photosynthetic carbon assimilation and thermoluminescence in unicellular alga, *Chlorella pyrenoidosa*/Photosynthetic regulation of senescence in green leaves: involvement of sugar signaling/UV Radiation and Photosynthesis

Audience – For Researcher/Faculty and student as reference.

Photosynthesis

Overviews on recent progress and future perspectives

Editors



Shigeru Itoh • Prasanna Mohanty
K.N. Guruprasad

ISBN: 978-93-81141-00-7/Year 2015
Size 18 cm × 24 cm/Pages 304
Hardback/₹ 1995.00

This book contains selected overviews on several important aspects of photosynthesis and provides both tutorial content and critical insight into the future of photosynthesis research.

Photosynthesis has been a challenging scientific topic since it deals with the process by which a wide range of organisms from bacteria to higher plants convert solar energy to chemical energy for producing food, fibre and fuel out of small molecules of carbon dioxide and water. Deeper and greater understanding of this process holds a promise for a more sustainable Earth with enjoyable pollution-free environment with new technologies for food and cleaner energy for a peaceful and progressive society. Thus, there have been global efforts to mimic the photosynthetic process to meet the needs of the future world.

This book having 19 chapters, gives glimpses of recent progress and future projections on photosynthesis, a process that feeds all living organisms and sustains the globe honours Professor Govindjee, Emeritus Professor of Biophysics Biochemistry & Plant Biology at the University of Illinois, USA. He is an outstanding researcher & teacher of photosynthesis and a global leader for stimulating photosynthesis research throughout the world. This book is useful for researcher/faculty and students as reference/text for courses in plant biology, environmental biology and agriculture.

Contents:

Dissecting oxygenic photosynthesis: the evolution of the "Z"-scheme for thylakoid reactions/Molecular architecture of photosynthetic apparatus/State shifts in photosynthetic organisms: tracking traits and techniques/Dissipation of excess absorbed energy by the photosynthetic apparatus of cyanobacteria/the functional sites of electron transfer cofactors in photosystem II studied by pulsed EPR/Delayed fluorescence of chlorophyll *d* and chlorophyll *a*; emission/Excitation spectra and activation energy in photosystem II of acaryochloris marina and *Synechocystis* sp. *PCC* 6803/Delayed fluorescence in a millisecond range – a probe for the donor side-induced photoinhibition in photosystem II/Redox control of leaf variegation and chloroplast biogenesis in arabidopsis thaliana/Transcriptional response to low-O_2 conditions in *Synechocystis* sp. strain PCC 6803 includes induction of a gene cluster containing *psbA* and *petC2*/Mutants of chlorophyllide oxygenase/A comprehensive study of the effects of nitrite anion on photosynthetic electron transport chain/Mitochondrial oxidative metabolism optimizes photosynthetic carbon assimilation through redox and ROS linked metabolite shuttles/Leaf senescence and abiotic stresses share chloroplast degradation, ROS involvement and transcription factors/Inactivation and repair of photosynthetic machinery under heat stress/Salinity tolerance strategies in mangroves: salt shock experiments for assessing stress-triggered effects during salt stress and post stress recovery in a true

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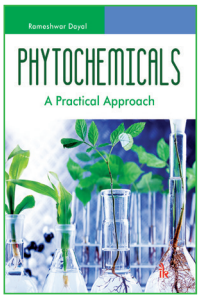
+91-011-43205400 info@ikinternational.com

mangrove *bruguiera gymnorrhiza*/metal toxicity and photosynthesis/ Effects of heavy metals on photosynthetic carbon assimilation and thermoluminescence in unicellular alga, *Chlorella pyrenoidosa*/ Photosynthetic regulation of senescence in green leaves: involvement of sugar signaling/UV Radiation and Photosynthesis

Audience – For Researcher/Faculty and student as reference.

Phytochemicals

A Practical Approach



Rameshwar Dayal

ISBN: 978-93-85909-82-5/Year 2018
Size 18 cm × 24 cm/Pages 294
Hardback/₹ 1295.00

Plants are the greatest organic chemists on the earth. In the laboratory of nature, they carry out complex organic syntheses to manufacture complicated chemical compounds with an amazing degree of accuracy, structures and characteristics. The different properties of the plants and their products are due to the presence of chemical compounds in them. A number of compounds belonging to different classes have already been isolated and characterized. The aim of the book is to provide a simple, concise and collective description about the isolation and characterization of chemical compounds from the different parts of the plants. This book will be immensely useful to students, researchers, academicians, scientists, industrialists, and the people who are interested in the field of phytochemistry.

Salient Features:

- A brief description of the main classes of secondary metabolites isolated from the different parts of the plants.
- Basic information about the chromatography used for the isolation of pure chemical compounds from the mixture of compounds present in the plants extractives.
- Basic information about the infrared spectroscopy (IR), ultraviolet spectroscopy (UV), nuclear magnetic resonance spectroscopy (NMR), and mass spectroscopy (MS).
- Isolation and structure elucidation of chemical constituents from 29 plants species. About 104 pure chemical compounds were isolated using various separation techniques (CC, TLC, PC, HPLC) and characterized using their spectral data (IR, UV,1HNMR,13CNMR, 2DNMR and MS). The structures of the compounds have been given.
- Essential oils, methods of isolation and their characterization from the different parts of 14 plant species. About 74 chemical compounds mainly monoterpenes and sesquiterpenes were identified in the different essential oils by GC-MS. The structures of the major constituents (22) have been given.
- Brief description about fatty oils, isolation and their characterization from the seeds of 7 plant species. Thirteen fatty acids were identified in the different fatty oils by GLC.

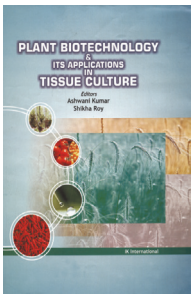
Contents:

Introduction/Essentials of chromatography/Introduction to Spectroscopy/Chemicals from plants/Chemical constituents of some useful plants/Analysis of essential oils from some plants/Analysis of fatty oils from the seeds of some forest plants

Audience – Students, researchers, academicians, and scientists in chemistry, phytochemistry, pharmaceutical chemistry, pharmacy, ayurveda/ sidhha/ unani, botany. Industry professionals in phytochemistry and pharmaceutical sectors.

Plant Biotechnology & its Applications in Tissue Culture

Editors



Ashwani Kumar • Shikha Roy

ISBN: 978-81-88237-50-0/Year 2006
Size 18.5 cm × 24 cm/Pages 326
Hardback/₹ 1995.00

In recent years, plant cells are being increasingly utilized as model systems to unravel the cellular and molecular mysteries of nature. The basic mechanisms of developmental biology, cellular and molecular interactions at the cell and tissue level, gene expression and regulation leading to genetic modifications and areas of genomics, are constant ares of research.

Salient Features:

- Embryogenesis, regeneration and micropropagation
- Genomics and genetic transformation systems
- Secondary metabolites, metabolic engineering and molecular biology
- Resistance to biotic and abiotic stress
- Tree biotechnology

The present book is an attempt to deal with all the topics in-depth and to find out the molecular aspects of different processes in cultured plant cells, so as to exploit them for the benefit of plant biotechnology.

Contents:

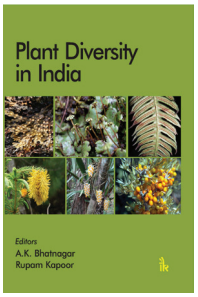
Some studies on Somatic Embryogenesis: A tool in plant biotechnology/Cellular differentiation and genetic transformation studies in Indian Legumes, Crucifers, Mulberry and Cereals/ *Agrobacterium* mediated transformation of chickpea (*Cicer arietinum L.*)/Constraints and relevant strategies in genetic transformation of sorghum/Selection of transgenic plants using positive selectable markers and other non-antibiotic marker genes/Production of hybrid plants in Thompson seedless grapes (*Vitis vinifera*) through breeding an in ovulo embryo rescue methods/Somatic embryogenesis in chickpea (*Cicer arietinum L.*)/Polyamines and long-term plant regeneration/ Somatic embryogenesis in chir pine (*Pinus roxburghii Sarg.*)/Molecular diversity of elite WA-CMS maintainer lines with EUI gene for hybrid breeding in rice/Characterization of candidate clumps of *dendrocalamus strictus* using RAPDs/Plantlet regeneration from the nodal segments of pomegranate (*Punica granatum L.*)/ Hardening of *Garcinia indica*/ Production of plumbagin a multifarious medicinal compound from cultured cells of *Plumbago rosea L.*/Secondary metabolites from tissue cultures of some arid zone plants/Steroidal sapogenin in moth bean cultivars *in vivo* and tissue culture/Production of bacoside by multiple shoot cultures and in vitro regenerated plantlets of selected cultivar of *Bacopa monnieri* (L) Wettst/Biotechnology of medicinal plants/ Somaclonal variants for salt tolerance and *in vitro* propagation of peanuts/Flow cytometry: A comparatively new tool in plant biotechnology/Steroid factories: Prospects and practicalities in effective farming of *Solanaum* plants/Genetic transformation of grain legumes/In vitro Adventitive Embryony: A safe alternative to Citrus budwood importation/Micropropagation of *Gmelina arborea Roxb.* using mature tree tissues Optimization of *in vitro* responses/ Challenges in cashew tissue culture: An overview/Index.

Audience – Students and Research Scholars in Plant Biotechnology.

Plant Diversity in India

Editors

A.K. Bhatnagar • Rupam Kapoor



ISBN: 978-93-85909-69-6/Year 2018
Size 18 cm × 24 cm/Pages 624
Hardback/₹ 3995.00

India has a vast landmass of 328 million hectares, extending from the tropics to the alpine regions, rich wetlands to deserts, islands, long coastline to Western and Eastern Ghats and the high Himalayas. It has equally rich and diverse plant diversity, with over 47,000 species that are already documented. Because of the large population dependence on these plants, expansion of agriculture, urbanization and development efforts, many species are threatened too. Some of the issues concerning plant diversity in India are unique to the country. Taxonomic and floristic studies on all major groups have been carried out but the information is scattered in research papers and regional/local floras, manuals and monographs. This volume intends to bridge this gap. Nine of the thirteen chapters of this volume deals with different plant groups extending from algae to angiosperms and allied groups such as bacteria, fungi, lichens, and myxomycetes. There are chapters dealing with topical issues in global context on biodiversity with special reference to India such as climate change and its impact on biodiversity, crop diversity, and tradomedicalism. Each chapter is written by experts on the particular group and have long experience of research in it. Each chapter includes not only distribution and diversity but also major researches, economic uses and conventional human interactions. Lacunae in current knowledge are also pinpointed. The book provides information on ecosystem diversity, flora of special sensitive regions (mangroves, wetland, and coral reefs), and on policies and strategies being adopted for in situ and ex situ conservation.

Salient Features:

- Emphasises on unique characteristics, distribution, and diversity of different groups of plants (from Algae to Angiosperms), Fungi, Bacteria, Lichens, and Myxomycetes
- Covers ecosystem diversity, flora of special sensitive regions (mangroves, wetland, coral reefs), biosphere reserves
- Discusses climate change concerns vis a vis biodiversity in the global and Indian context
- Addresses issues related to crop diversity and conservation.

Contents:

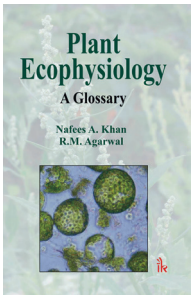
Plant Diversity in India: An Overview/Algal Diversity and Current Trends in Conservation/Bryophyte Diversity, Utility and Prospects/Diversity and Developments in Pteridophytes/Diversity and Developmental Biology of Gymnosperms/Plant Diversity in India: Angiosperms/Bacteria/The Myxomycetes/Fungi/Lichen Diversity in India/Climate Change and India: Impacts on Biodiversity/Crop Diversity and Conservation/Tradomedicalism: Indian Perspective

Audience – Students, researchers and policy makers in the Forestry sector, Ecological studies.

Plant Ecophysiology

A Glossary

Nafees A. Khan • R.M. Agarwal



ISBN: 978-93-81141-15-1/Year 2011
Size 14 cm × 21.5 cm/Pages 142
Paperback/₹ 265.00

Plant Ecophysiology: A Glossary will allow the students with an instant access to important terminology. For many topics and aspects related to plant ecophysiology, the students may find the book as a 'ready reckoner'/a useful revision aid and a stimulus for further study. It is a comprehensive and self-contained work. The book has been prepared with an objective to be of use both for a layman and to a professional, however, in no way act as a replacement for specialist treatises.

Plant physiology is a discipline that embraces physical and chemical laws governing physiological processes that are controlled by interaction with the environment. The main focus of the book is to provide material for quick revision of th keys in an easy-to-follow manner.

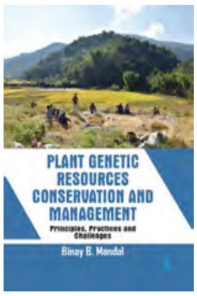
The book will provide contemporary material to those who aim to achieve goal by stepping to a new platform in carrier. It provides a unique and dynamic pedagogic improvement in a user-friendly way. The terms used are extensively streamlined for clarity of keys with a precaution that all important aspects of the subject have received consideration.

Audience – Researchers and Students of Plant Physiology.

Plant Genetic Resources Conservation and Management

Principles, Practices and Challenges

Binay B. Mandal



ISBN: 978-93-90620-21-0/Year 2022
Size 18 cm × 24 cm/Pages 344
Hardback/₹ 3450.00

Plant Genetic Resources Conservation and Management provides, in-depth description of principles and practices of the techniques of both ex situ conservation strategy (seed and field genebanks, in vitro, DNA and pollen storage), and in situ conservation strategy (on-farm and nature reserves) for plant genetic resources (PGR), and current status of their applications. The book covers all aspects of plant germplasm conservation and management including plant domestication and crop evolution, history of conservation, exploration, exchange, quarantine, conservation techniques, characterization and evaluation, information management, intellectual property rights and conservation under climate change. In the area of management of plant germplasm, the book has focused on topics such as sampling techniques during collecting, strategies for enhancing exchange, biosafety and regulation of genetically modified (GM) crops, role of evaluation, core collection and pre-breeding in germplasm utilization.

Additionally, it focuses on intellectual property rights (IPRs) and various international treaties on plant germplasm which have made access to genetic resources, a debated topic. It also includes the challenges of conservation in the event of climate change and their potential solutions. The content of the book provides comprehensive knowledge about plant germplasm conservation and management to help understand the basic principles, practices and future challenges involved. With its coverage and specific focused topics, it will be useful to researchers, conservationists, teachers, as well as students who are involved or interested in PGR conservation and management..

Salient Features:

- Provides methodologies, status and challenges of application of the techniques of ex-situ conservation (seed, field, in vitro & DNA genebanks) and of in-situ conservation (on-farm & nature reserves) of plant genetic resources.
- Focuses on topics of germplasm management like sampling during collecting, enhancing exchange, genetically modified crops in quarantine, core collection in management, evaluation and utilization.
- Deals with intellectual property rights, access to plant genetic resources, and challenges and potential strategies for germplasm conservation under climate change.

Contents:

Introduction to Plant Genetic Resources and Their Conservation/History of Plant Genetic Resources Conservation/Plant Domestication and Crop Evolution/Plant Germplasm Exploration and Collecting/

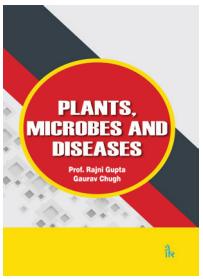
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Introduction and Exchange of Plant Genetic Resources/Plant Quarantine and Related Regulatory Processes/Ex Situ Conservation: Seed Genebanks/Ex Situ Conservation: Field Genebanks, Botanical Gardens and Arboreta/Ex Situ Conservation: In Vitro, DNA and Pollen Conservation/In Situ Conservation: On-farm and Home Gardens/In Situ Conservation: Nature Reserves/Characterization, Evaluation and Utilization of Germplasm/Genetic Resources Information Management/Intellectual Property Rights and Access to Plant Genetic Resources/Climate Change and the Conservation of Plant Genetic Resources/Appendix 1/Appendix 2. A List of Basic Equipment for Germplasm Collecting/References/Index*Audience* – Undergraduate and Postgraduate students of Botany, Biotechnology & Biology.

Audience – UG, PG students of Agricultural Science

Plant, Microbes and Diseases



Dr. Rajni Gupta
Gaurav Chugh

ISBN: 978-81-948676-2-3/Year 2022
Size: 16 cm × 24 cm/Pages 376
Paperback/₹ 645.00

Plant diseases are caused by several microorganisms such as bacteria, fungi and viruses. They significantly affect plant health and productivity. Recent advances in molecular and genomics of plant diseases raises a need to integrate knowledge of microbial taxonomy, genomics, and plant pathology that reflects state-of-the-art knowledge about plantdisease mechanisms. This book provides a concise but comprehensive description of plant diseases with special focus on plant diseases caused by numerous microbial pathogens, from a plant biologist's and a microbiologist's point of view. This book includes chapters on diseases caused by fungi, bacteria, virus, and nematodes and provides an improved understanding of the epidemiology, current concepts of pathogenesis and mechanisms of their biology. It provides the most recent information on the classification of plant pathogenic microbes, causes, mode of transmission, symptoms and treatments of important plant diseases also taking into consideration the molecular interactions between host cells and infectious agents. The presentation of these topics is followed by a discussion on systemic and biological control of diseases, as well as postharvest diseases of plant products and studies on AM fungi. The book provides necessary references, basic lab techniques and literature citations to allow a more detailed investigation of particular diseases and control. This book would be indispensable for researchers and will also serve as a textbook for advanced undergraduate and postgraduate students of disciplines of botany, plant pathology, crop science and microbiology.

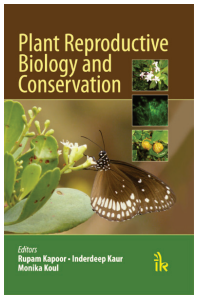
Salient features

- Explores the role of microbes in the pathogenesis of common plant diseases.
- Excellent resource for both undergraduate and postgraduate courses in Botany, Agriculture, microbiology and related domains.
- Latest and updated information of plant pathogenic microbes with comprehensive diagrams and photographs.
- Describes several specific plant diseases (both pre- and postharvest) caused by fungi, bacteria, virus and nematodes.
- Practical disease management strategies controlling enormous losses caused by these plant diseases.
- Latest information on genetic, molecular and biological techniques in control of plant diseases.
- Includes section on AM fungi and basic lab techniques in microbiology.

Contents:

Introduction/ Host Parasite Interaction/ Disease Resistance/ Biocontrol of Disease/ Disease Caused by Fungi/ Disease Caused by Bacteria/ Disease Caused by Viruses/ Disease Caused by Nematodes/ Postharvest Disease/ Arbuscular Mycorrhizal Fungi in Horticultural Systems/ Lab Technique

Plant Reproductive Biology and Conservation



Editors

Rupam Kapoor • Inderdeep Kaur
Monika Koul

ISBN: 978-93-82332-90-9/Year 2015
Size 18 cm × 24 cm/Pages 496
Hardback/₹ 3225.00

Reproductive biology of plants is an emerging frontier area in plant sciences. Recent advances and research in this field are laying foundations for major conservation programmes initiated for protection of plant species all over the world. Reproductive mechanisms that operate in plants account for the diversity and evolution of many important families.

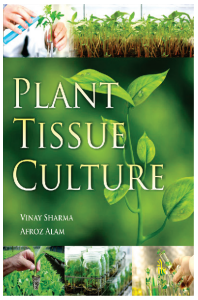
The present volume is a compilation of eighteen chapters written by eminent scientists who work on various aspects of plant reproduction, conservation of species, and molecular characterization of reproductive traits. It gives updated literature on the topics of academic and research interest. Also, the endeavour is to incite inquisitive youngsters to pursue research in this field. The book is well illustrated and makes an interesting reference material for undergraduate as well as postgraduate students.

Contents:

Reproductive biology: an important discipline of plant sciences/A molecular genetic approach elucidates complex plant reproductive processes/Recruitment limitation: a major driver for species vulnerability/Phenological implications for the conservation of forest trees/Techniques involved in reproductive biology: newer insights and future perspectives/Sterility in plants/Apomixis in angiosperms/Love in the air: wind pollination – ecological and evolutionary considerations/Emerging trends in endosperm biology/Reproductive biology in relation to conservation: case history of artemisia maritimal/An appraisal on in vitro conservation and biotechnological interventions in spilanthes acmella murr/ Genetic control of mitosis and meiosis in angiosperms/Role of reproductive biology in conservation of plants/Serpentinophytes: resource survey and conservation for potential applications in biotechnology/Pollination ecology of cullenia exarillata A. Robyns, a key food plant in the tropical evergreen forest ecosystem of the western ghats/Reproductive success of angiosperms in response to climate: an assessment/Arbuscular mycorrhizal fungi: potential role in conservation of endangered plants/Genetic Diversity in Various Seed Spices and Medicinal Plants Using Different Molecular Markers/ Index.

Audience – Undergraduate and Postgraduate students of Botany, Biotechnology & Biology.

Plant Tissue Culture



Vinay Sharma • Afroz Alam

ISBN: 978-93-84588-44-1/Year 2015
Size 18 cm × 24 cm/Pages 404
Paperback/₹ 545.00

TThe present book is an endeavour to make comprehensive, authentic and standard study material related to Plant Tissue Culture, accessible to the readers. This book has been assembled to accomplish the needs of undergraduate and post-graduate students of Plant Tissue Culture. Aspirants for the Civil Services and other competitive examinations too will surely gain advantage by this book.

The book is divided into twenty chapters which deal with Basic Equipment and Facilities for Plant Tissue Culture, Media Composition, Tissue Culture Techniques, Plant Cell Culture, Protoplast Isolation

and Culture, Somatic Hybridization, Somatic Embryogenesis, Synthetic Seed, Micropropagation, Haploid and Triploid Production, Embryo Culture, etc. Many recent techniques are also provided such as Germplasm Storage, Genetic Transformation, Genetically Modified (GM) Plants with their Risks and Benefits, Metabolic Engineering, Useful Genes in Plant Genetic Engineering, Terminator Technology and Molecular Markers and their applications.

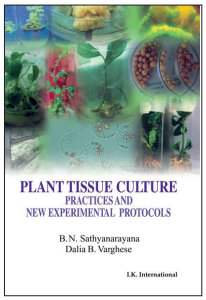
The primary aim of this book is to provide all relevant information covering both conventional and modern aspects of Plant Tissue Culture at one place.

Contents:

Introduction/Basic Equipment and Facilities for Plant Tissue Culture/Media Composition/Tissue Culture Techniques/Plant Cell Culture/Protoplast Isolation and Culture/Somatic Hybridization/ Somatic Embryogenesis/Synthetic Seed/Micropropagation/Haploid Production/Triploid Production/Embryo Culture/Germplasm Storage/Genetic Transformation/Genetically Modified (GM) Plants: Its Risks and Benefits/Metabolic Engineering/Plant Genetic Engineering—Genes of Interest/Molecular Markers and Their Applications in Plant Species/Plant Tissue Culture & Scope for Entrepreneurs/Glossary/Suggested Readings/Index

Audience – Students of Botany and Biotechnology.

Plant Tissue Culture
Practices and New Experimental Protocols



B.N. Sathyanarayana • Dalia B. Varghese

ISBN: 97-81-89866-11-2/Year 2007
Size 16 cm × 24 cm/Pages 318
Hardback/₹ 1595.00

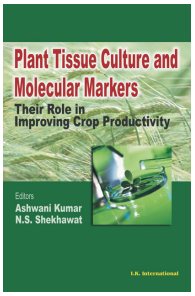
Plant Tissue Culture forms an integral basis of the present day biotechnology. *Plant Tissue Culture: Practices and New Experimental Protocols* is being brought out to fill the existing gap in the available literature on plant tissue culture, especially focusing on the aspects of practical procedures and protocols of tissue culture. This book contains important experimental techniques it has been designed in a simple way, giving all the necessary procedures as a general guideline and also necessary tips to manoeuvre any problem encountered. These tips are based on the first hand experiences of the author while teaching and researching the techniques of plant tissue culture. A unique feature of this book is the inclusion of several techniques describing the actual protocols experimented and developed with different plant species by different scientists.

Contents:

Historical Developments in Plant Tissue and Cell Culture/ Laboratory Design and Development/Instrumentation/Plant Tissue Culture Media/Sterilization Techniques/Safety Rules and Regulations/Applications of Plant Tissue Culture/ Micropropagation/Micropropagation by Proliferation of Auxiliary Buds/Micropropagation by Adventitious Shoot Regeneration/ Plant Regeneration from Callus Cultures/Plant Regeneration by Somatic Embryogenesis/Meristem Culture/*In vitro* Haploid Production/Embryo Culture/Endosperm Culture/Culturing of Roots *in vitro*/Protoplast Isolation and Culture/Protoplast Fusion and Cybridization/Storage Organ Culture/*In vitro* Germplasm Conservation/*In vitro* Production of Plant Secondary Metabolites/ Acclimatization of Micropropagated Plantlets/*In vitro* and *ex vitro* Rooting of Micro Shoots/Somaclonal and Gametoclonal Variations/ Agrobacterium Mediated Transformation/ Problems in Plant Tissue Culture/Commercial Micropropagation/Microscopic and Photographic Techniques for Plant Tissue Culture/Histological Techniques/Glossary/Appendix/Bibliography.

Audience – Plant Biotechnology.

Plant Tissue Culture and Molecular Markers
Their Role in Improving Crop Productivity



Editors

Ashwani Kumar • N.S. Shekhawat

ISBN: 978-81-89866-10-5/Year 2009
Size 18 cm × 25 cm/Pages 714
Hardback/₹ 2495.00

The present book discusses micropropagation studies on several crop plants, molecular basis of understanding various life processes including molecular basis of somatic embryogenesis and other physiological and biochemical processes having significant biotechnology application. It vitro studies of some important plants like *Aloe vera, Simmondsia chinensis, Anacyclus pyrethrum and Crataeva nurvala, Arachis hypogaea* L., *Phoenix dactylifera, Dendrocalamus asper, Asparagus adescendents* Roxb., natural products of plants origin with their therapeutic potential and biotechnological production, genome analysis of crop plants with future applications in biotechnology etc. It is useful for postgraduates and researchers in plant biotechnology and related areas like plant science, biotechnology, bioscience, environmental science, food biosciences and chemistry. It will also be of interest for professionals working in the plant biotechnology industry.

Contents:

Contamination Control and Enhanced Axillary Budding from Mature Explants of *Taxus baccata* ssp. *Wallichiana*/Bioinformatics: an Overview/Intellectual Property Rights in Biotechnology/ *In Vivo* and *In Vitro* Studies on Plant Tumors/Integrated Approaches of Mutagenesis and *In Vitro* Selection for.../Clonal Fidelity in Micropropagated Plants/Tissue Culture of Date Palm (*Phoenix Dactylifera* L.)—A Non-conventional Approach/ Cytological Analysis of Nodal Stem Segment and Callus Regenerated Plantlets of *Azadirachta indica.../* Establishment of an *in vitro* Clonal Propagation Method for Commercial Exploitation from A High Biomass Yielding *Aloe Vera* (L.) Germplasm/Unravelling the Molecular Basis of Somatic Embryogenesis/Doubled Haploids in Crop *Brassicas*: Retrospect and Prospects/A Review of Tissue Culture Studies on Bamboos/ Cloning of Female Plant of *Simmondsia Chinensis* (Link) Schneider Selected for Cultivation in Rajasthan/Comparative Studies on Somatic Embryogenesis and Plant Regeneration from Immature and Mature Zygotic Embryo Axes of Groundnut/*In Vitro* Studies and Micropropagation of *Anacyclus pyrethrum* and *Crataeva nurvala*/ Micropropagation and Large-Scale Plant Regeneration of Edible Bamboo *Dendrocalamus asper* through Somatic Embryogenesis/ Natural Products of Plant Origin with Therapeutic Potentiality and their Biotechnological Production/ Micropropagation of Medicinal Plants of Indian Desert and Aravallies/Morphological and Biochemical Changes in *in vitro* Raised *Arachis Hypogaea* Var RG-141.../Morphogenesis in Cultured Tissues of Three Grass Species/*In Vitro* Propagation of *Vigna sp*/Biology and Biotechnology of Groundnut (*Arachis hypogaea* L.) — A Review/Propagation of *Chlorophytum Borivilianum* San. and Fern.—A Review/Recent Advances in Micropropagation of *Chlorophytum Borivilianum* Sant. & Fern./Enhancement of Secondary Metabolites by Elicitation and Metabolic Engineering/High Frequency Plant Regeneration for *Saccharum Munja* — A Useful Plant of Arid Area/Biology and Biotechnology of *Lasiurus Sindicus* (Shewan): A Valuable Grass of Thar Desert/Liquid Culture System Stimulates *In Vitro* Growth and Shoot Multiplication in Some Medicinally Important Plant Species in Rajasthan/*In Vitro* Approaches for Plant Regeneration

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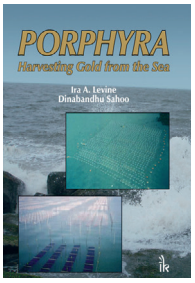
and Conservation of Some Potential Medicinal Plants/Rejuvenation of Mature Plant Tissues/Molecular Characterization of Diversity in *Feronia limonia* Using ISSR Markers/Molecular and Morphometric Diversity in Relation to Breeding System in *Andrographis Paniculata* (Burm. f.) Nees/An Approach to Determine Polymorphic and Sharing of Genome Between Crops of Poaceae Family Using RAPD as Genetic Tool /Molecular Biology of Fruit Ripening/Molecular Markers — an Important and Indispensable Biotechnological Tool for Crop Improvement and Conservation/Morphological and Molecular Characterization of a Rare Medicinal Herb 'Safed Musli' (*Chlorophytum Borivilianum* Sant. Et Fernand.)/Biochemical Changes Associated with Morphogenesis in Saffron/Insecticidal Genes and their Sustainable Use in Insect Resistant Transgenic Crops/Gene Tagging : A Golden Research Area in Agriculture Biotechnology/ Alternative Respiration may Have a Role in Reducing Oxidative Stress in Plants/Tissue Culture Techniques in Introgression of Resistance to *Alternaria helianthi* from Wild Sunflowers to Cultivated Sunflower (*Helianthus annuus* L.)/Virus Resistance Inducing Proteins From Plants/Effect of NaCl and Thermal Stress on Proline Content and Electrophoretic Behaviour of Protein in Small-Millets Seedlings Grown *In Vitro* /A Study of Systemic Acquired Responses to Pathogen Attack in Certain Economically Important Crops/Efficient Microdosing of Phosphorus to Pearl millet Hybrids (*Pennisetum americanum* L.) for Improved Seedling Establishment under Nutrient-Stressed Environments/Index.

Audience – PG and Research students, Scientists, Engineers: Biological, Plant, Microbiology, Bioengineering and Biotechnology.

Porphyra

Harvesting Gold from the Sea

t



Ira A Levine • Dinabandhu Sahoo

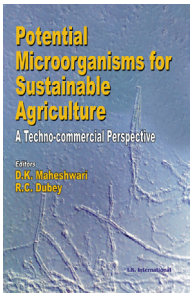
ISBN: 978-93-80026-94-7/Year 2010
Size 21.5 cm × 28 cm/Pages 104
Hardback/₹ 995.00

(See on page 175)

Potential Microorganisms for Sustainable Agriculture

A Techno-commercial Perspective

Editors



D.K. Maheshwari • R.C. Dubey

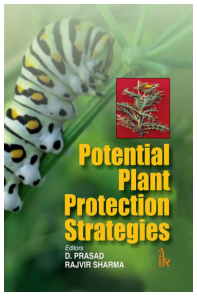
ISBN: 978-81-907462-0-5/Year 2008
Size 18 cm × 24 cm/Pages 500
Hardback/₹ 2445.00

(See on page 175)

Potential Plant Protection Strategies

Editors

D. Prasad • Rajvir Sharma



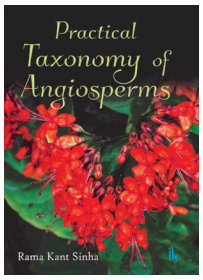
ISBN: 978-93-80578-29-3/Year 2011
Size 18 cm × 24 cm/Pages 564
Hardback/₹ 3445.00

(See on page 176)

Practical Taxonomy of Angiosperms

(Second Edition)

t



Rama Kant Sinha

ISBN: 978-93-86768-52-0/Year 2019
Size: 18 × 24 cm/Pages 448
Paperback/₹ 525.00

In this second edition, the book has been thoroughly revised eliminating errors and changing some of the contents in the light of recent developments in the field of plant taxonomy.

The book presents the subject in a systematic manner with well labelled diagrams and flowcharts. A sincere effort has been made to make this book more informative and useful by covering all the important aspects of the subject.

New topics in this edition

- The topic "Herbarium" is rewritten to make it more useful and informative.
- History of classification of plants and scientists' contributions.
- Botanical gardens.
- Pollination and fertilization.
- Description and systematization of plants of families Annonaceae and Nyctaginaceae.

Salient Features:

- Morphology of angiosperms where terminology used in taxonomic description of plants is arranged alphabetically—under subheads stem, leaves, flowers, etc.
- Taxonomy of angiosperms. Principles of taxonomy, handling.
- Description, systematization and identification of 84 plants of 44 families of angiosperms.
- Brief account of 143 plants of different families.
- Comparison of allied common angiospermic families in tabular form.
- Economic importance of 106 familiar plants.
- Differences between allied terminology (e.g., phyllode, phylloclade, silqua & siliqula.) are presented in tabular form.
- Artificial key to the common families of angiosperms.
- Upgraded standard of practical exercises on plant taxonomy.

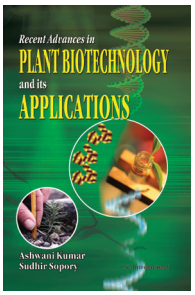
Contents:

Morphology of Angiosperm/Taxonomy of Angiosperms/Description & Identification of angiospermic Plants/Comparison of Some Allied Families of Angiosperms/Economic Botany/Further Reading/ Appendix/Glossary of Common Words (Greek and Latin Roots)/ Some Curiosities/Botanical Riddles/Viva Voce/Index

Audience – Undergraduate students of Botany and Agriculture

Recent Advances in Plant Biotechnology and its Applications

Editors



Ashwani Kumar • Sudhir K. Sopory

ISBN: 978-81-89866-09-9/Year 2008
Size 18 cm × 25 cm/Pages 706
Hardback/₹ 2495.00

The present book is an encyclopaedia of latest information in the field of biotechnology and covers comprehensive reviews and articles on the major subjects of study in this field.

Recent Advances in Plant Biotechnology discusses genomics with special reference to crop plants, modulation of chlorophyll genes, genetic engineering; especially of foliage plants, trees and fruits, bamboos and crop plants, engineering of recombinant plastids, molecular aspects of embryogenesis in cereals, identity especially of

foliage plants, trees and fruits, bamboos and crop plants, engineering of recombinant plastids, molecular aspects of embryogenesis in cereals, identity preservation in genetically modified crops, environmental biotechnology with regard to salt tolerance, medical biotechnology, gene targeting, biotechnological applications of plant viruses, enhanced production of recombinant proteins, plant based macromolecules of therapeutic importance, antioxidant potential of plants for human welfare, bio-crude and bio-fuels from plants etc.

Contents:

Wild Species of *Oryza* as an Important Reservoir of Useful Alleles/ Plant Genetic Transformation: Methods & Emerging Trends/The Engineering of Recombinant Plastids in Higher Plants/Inducible Gene Expression Systems as Tools for Plant Functional Genomics/ Gene Targetting in Higher Plants/Effect of Brassinolide on Growth, Yield, Metabolite Content & Enzyme Activities of Tomato (*Lycopersion esculentum* Mill)/Ornamental Foliage Plants: Improvement through Biotechnology/*In Vitro* Propagation of Tropical and Sub-tropical fruit Crops/*In Vitro* plantlet regeneration in *Asparagus racemosus* through Shoot Bud Differentiation on Nodal Segments/Micropropagation of Ringal Bamboo *Drepanostachyum falcatum* (Nees) Keng. F. Through Nodal Segments/Isolated Microspore Embryogenesis in Cereals: Aspects and Prospects/Plant Regeneration from Cell Suspension Culture-derived Protoplasts of *Phellodendron amurense* Rupr./ Importance of Micropropagation Technique in Enhancing the Productivity of Crops/High Efficiency Transformation in *Artemesia annua* with *Agrobacterium tumefaciens* / Identity Preservation in Genetically Modified Crops/Genetic Improvement of Castor (*Ricinus communis* L.) through Tissue Culture and Biotechnological Tools/ Enhanced Production of Recombinant Proteins from Plant Cells/ Light and Dark Modulation of Chlorophyll Biosynthetic Genes in Response to Temperature/Signalling Components in Programmed Cell Death: Molecular and Functional Similarities between Animals and Plants/Designing New Plant Genotypes with Enhanced Resistance to Salinity/Defence Response of Moth Bean (*Phaseolus acontifolius*) to *Macrophomina phaseolina*: Role of Polyphenols, PAL and b-1,3-glucanase/Host-Pathogen Interaction in *Sesamum indicum*: Synthesis of PR-Proteins/Regulation of Stomatal Opening and Signal Transduction Components in Guard Cells/*Allium sativum* Leaf Lectin, A Potent Sap Feeding Insect Control Protein Expressed in Rice and Mustard/Molecular Tools in Medicinal Plants: A Review/Forskin Biosynthesis and Invertase Activity in *Agrobacterium rhizogenes* mediated Transformed Roots of *Coleus forskohlii*/A Novel Source for Furanocoumarins: *Ruta graveolens* L./ Antioxidant Potential of Plants and Their Impact on Human Health/ Arabinogalactan and Arabinogalactan-protein Complexes (AGPs) a Natural Plant Derived Macromolecule of Therapeutic Importance/ Transgenics of Some Medicinal Plants/*In Vitro* Regeneration of a Rare Medicinally Potent Plant of Eastern Himalayan Hotspot/A Comparative Study of Growth Kinetics in Hairy Root Cultures of *Solanum khasianum* Clark Grown in Shake Flasks and Bioreactors/ Micropropagation and Alkaloid Production through Somatic Embryo Cultures of Corydalis/Biotechnological Approach on Production of Ginkgolides from Cell Cultures of *Ginkgo biloba* L./Applications of Biotechnology in Indian Ginseng (Ashwagandha): Progress and Prospects/Prospects of Ephedrine in Desert Plants of Rajasthan/ Genetic Engineering: A Powerful Tool to Combat Viral Diseases of Plants/Ayurvedic Medicine: Some Potential Plants for Medicine from India/Bioengineering of Crops for Biofuels and Bioenergy/Genetic Engineering of Orchids/State-of-the-art Genome Profiling (GP): A Key Tool for Plant Biotechnology /Application of Genetic Silencing in Crops/Index.

Audience – Postgraduates and researchers in plant biotechnology and related sciences in departments of plant science, biotechnology, bioscience, environmental science, food biosciences and chemistry. It will also be of interest for professionals working in the plant biotechnology industry.

Recent Mycological Researches



Editor

S.C. Sati

ISBN: 978-81-88237-80-7/Year 2007
Size 18 cm × 24 cm/Pages 352
Hardback/₹ 1295.00

Microbes, including fungi, constitute an important component of biodiversity. They comprise one of the biggest kingdoms in the living world. A lot of work has been done in mycology in the past several years in India and abroad.

The present book highlights latest researches in the field of mycology carried out by mycologists from the Indian subcontinent. It comprises a collection of 26 original research articles by eminent mycologists. These articles have been categorized under the following four major sections:

Fungal Flora/Diversity/Fungal Diseases/Management/Fungal Physiology/ Ecology/Pollution/Fungal Biotechnology and Symbiosis

This book would be very useful for researchers, teachers and students studying mycology.

Sectional Contents:

Section A: Fungal Flora/Diversity

Section B: Fungal Diseases/Management

Section C: Fungal Physiology/Ecology/Pollution

Section D: Fungal Biotechnology and Symbiosis.

Audience – Postgraduate and research students of Plant Sciences.

Recent Trends in Life Sciences



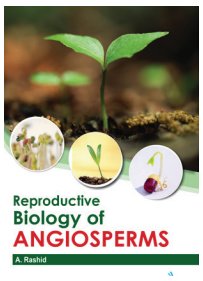
Editors

M.H. Fulekar • R.K. Kale

ISBN: 978-93-82332-25-1/Year 2014
Size 18 cm × 24 cm/Pages 412
Hardback/₹ 3225.00

(See on page 197)

Reproductive Biology of Angiosperms



A. Rashid

ISBN: 978-93-90620-83-8/Year 2022
Size 16 cm × 24 cm/Pages 440
Paperback/₹ 545.00

The present book entitled, "Reproductive Biology of Angiosperms" is an up to date account of embryology subject fortified with recent researches on the subject as well as highlights the results of analytical disciplines such as Physiology, Biochemistry, Genetics and Molecular Biology, in particular Gene Action.

The present book begins by an introductory chapter: Importance of Reproductive Biology and ends up in last chapter 21: Applications of Reproductive Biology. In between are chapters on different aspects of Reproductive Biology of Angiosperms. Some of these chapters are new, hitherto, underscribed.

This book is aimed to be a textbook on Reproductive Biology of Angiosperm for B.Sc. and M.Sc. students of Botany.

Contents:

Significance of Reproductive Biology of Angiosperms/Flowering/ Male Gametogenesis (Microsporangium and Microsporogenesis)/ Induction of Male Sterility and Restoration to Fertility/In Vitro and In

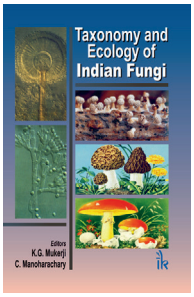
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Vivo Germination of Pollen and Pollen Tube Growth/Megasporangiun and Megasporogenesis, Female Gametogenesis/Pollination, Pollen-Pollinator and Pollen-Pistil Interactions/Fertilization (in vivo and in vitro)/Self-Incompatibility/Zygotic Embryogenesis/Endosperm Origin, Development and Differentiation/Polyembryony/Induction of Haploid Plants on Culture of an Anther and Gynoecium/Induction of Haploids on Culture of Pollen (Microspores)/Induction of Haploids on Chromosome Elimination in Wide Cross/Apomixis Fruit Biology/Seed Biology/Somatic Embryogenesis/Protoplasts and Parasexual Plants/Applications of Reproductive Biology/Reference/Index

Audience – Undergraduate and Postgraduate students of Botany, Biotechnology and Agriculture.

Taxonomy and Ecology of Indian Fungi



Editors

K.G. Mukerji • C. Manoharachary

ISBN: 978-93-80026-92-3/Year 2010
Size 18 cm × 24 cm/Pages 304
Hardback/₹ 795.00

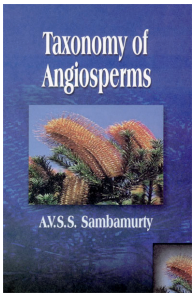
The present book includes 16 chapters contributed by eminent mycologists. Chapters include data on diversity, taxonomy, ecology and application of Helicosporous fungi, genus *Spegazzinia*, Rusts and Smuts, Chaetomiaceae, *Macrophomina*, *Rhizoctonia*, *Russula*, wild edible fungi, poisonous mushrooms, insect fungi and other related aspects. This book will be very useful and a valuable addition to the existing literature on the same subject.

Contents:

Helicosporium Species from India/Taxonomy of Eriocerco-sporaceous Fungi/Spegazzinia Species from India/Rhizoctonia D.C.: Taxonomy, Ecology and Management/Characterization of Cotton Root Rot Pathogens Rhizoctoniasolani and R. bataticola using RAPD and Morphological Markers/Macrophomina: Taxonomy, Ecology, Diseases and their Management/Taxonomy and Ecology of Chaetomiaceae/Teliospore Germination, Germination Products and Conservation of Smut Fungi with Reference to Spore Dormancy, Viability, Activation, Inhibitors, Germination, Germination Products, Compatibility, Cultures and Systematics - A Review/Current Status of Biodiversity of Rust and Smut Fungi: Indian Perspective/Documentation of Wild Edible Mushrooms and their Seasonal Availability in Punjab/ Russulaceae of Kumaon Himalaya: An Overview/Morphotaxonomic Studies of Poisonous Mushrooms/Keratinophilic Fungi: Distribution and Prospects/Important Fungal Diseases of Rice in India and their Management/Mycoparasites in Disease Control/Fungal Fouling of Historical Wall Paintings/Index.

Audience – Students and Researchers in Taxonomy & Ecology.

Taxonomy of Angiosperms



A.V.S.S. Sambamurty

ISBN: 978-81-88237-16-6/Year 2005
Size 16 cm × 25 cm/Pages 908
Paperback/₹ 645.00

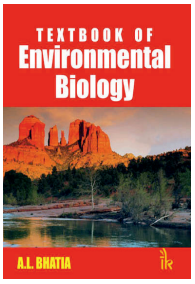
Taxonomy of Angiosperms is designed for B.Sc. (Hons.) and M.Sc. students of Botany. The book is divided into two parts; Part I deals with the Principles of Angiosperm Taxonomy and Part II deals with families. The book is amply illustrated with examples. Some of the important chapters in Part I comprise Different Classifications, Nomenclature, Biosystematics, Modern Trends in Taxonomy, Chemotaxonomy, Numerical etc. Part II deals with about 214 families of which 55 are discussed in detail and summarized accounts of the rest are given for advanced students.The book also loaded with numerous appendices like comparison of Classification, floral diagrams and floral diagrams and floral formulate, questions etc.

Contents:

Part I: Principles of Angiosperm Taxonomy: Plant Taxonomy/History of Classification/Systems of Classifications/Current Systems of Classification/Plant Nomenclature/Species Problem/Primitive vs. Advanced Characters/Taxonomic Hierarchy/Modern Trends in Taxonomy/Chemotaxonomy/Numerical Taxonomy/Biosystematics /Computerized Systematics/Reproductive Biology and Systematics/Fossil Angiosperms/Origin of Angiosperms/Plant Geography/Endemism/Introduction to Flora of India/Herbaria, Botanical Gardens, Plant Identification and Literaturein Taxonomy.
Part II: Families: More than 200 Families and 160 additional families described. Appendices/Refrences/Index.

Audience – B.Sc. (Hons.), M.Sc. and related fields like Medical Botany, Pharmacy, Agricultural Botany and Horticulture.

Textbook of Environmental Biology

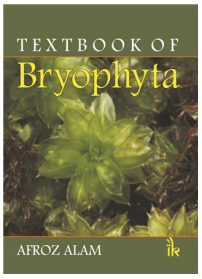


AL Bhatia

ISBN: 978-81-88237-87-6/Year 2010
Size 18 cm × 24 cm/Pages 432
Paperback/₹ 455.00

(See on page 245)

Textbook of Bryophyta



Afroz Alam

ISBN: 978-93-82332-54-1/Year 2015
Size 18 cm × 24 cm/Pages 452
Paperback/₹ 545.00

Textbook of Bryophyta is an effort to make available authentic and standard study material related to this remarkable group of plants. This book has been compiled exclusively to accomplish the need of undergraduate and postgraduate students in accordance with the latest universal core course adopted by them. Aspirants for the Civil Services and other competitive examinations will surely find this book highly useful.

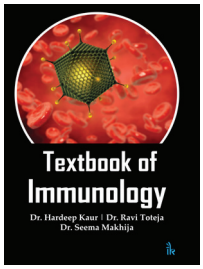
The book aims to provide a comprehensive account of bryophyta in a simple language and profusely illustrated manner for *better* understanding. The book is divided into twelve chapters which deal with life forms, life cycle, cytogenetics, classification, hepaticopsida, anthocerotopsida, bryopsida, uses of bryophytes, conservation of bryophytes and molecular bryology. The description of plants is well supplemented by suitable photographs and line drawings which will give a complete view with added advantage to the readers in identifying the plants in their natural habitats. The prime objective of this book is to provide all relevant information of bryophytes in one set.

Contents:

Introduction/Growth forms and life forms/Reproduction and lifecycle of bryophytes/cytogenetics and evolution/Classification/Class hepaticopsida/Anthocerotopsida/Bryopsida/Uses of bryophytes/Threats and coservation of bryophytes/Molecular bryology/Contributions of some indian bryologists/Suggested reading/Index

Audience – UG &PG students of botany.

Textbook of Immunology

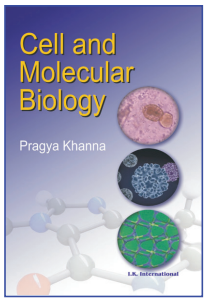


Dr. Hardeep Kaur
Dr. Ravi Toteja
Dr. Seema Makhija

ISBN: 978-93-90620-30-2 /Year 2021
Size: 18 cm × 24 cm/Pages 246
Paperback/₹ 675.00

(See on page 231)

Cell and Molecular Biology



Pragya Khanna

ISBN: 978-81-89866-59-4/Year 2008
Size 16 cm × 24 cm/Pages 400
Paperback/₹ 455.00

Cell biology is a fascinating branch of biological studies, providing answers to hitherto unanswered questions. It is the mother science to areas such as Molecular Biology, Molecular Genetics, Biotechnology, Recombinant DNA technology etc. During the last few decades the science of cell biology has grown at an unprecedented pace with the consequence that voluminous information has accumulated on the subject. *Cell and Molecular Biology* is intended as a textbook for B.Sc. (Hons.) and M.Sc. students of Biology. It is being prepared in accordance with the UGC guidelines.

Contents:

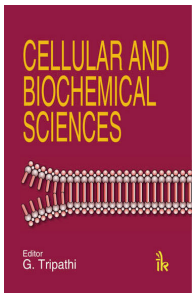
The Cell/Tools and Techniques in Cell Biology/Protoplasm/ Nucleic Acid/Cell Boundaries/ Mitochondria/ Plastids/ Endo-plasmic Reticulum/ Golgi Complex/Lysosomes/ Microbodies: Peroxisomes and Glyoxysomes/Ribosomes/Cytoskeleton: Microtubules, Microfilaments and Microvilli/Cilia and Flagella/Centrioles and Basal Bodies/The Nucleus/Chromosomes/Cell Reproduction: Cell Growth and Cell Cycle/ Gametogenesis/Fertilization/Genetic Material: Properties and Replication/ Protein Synthesis/Genetic Code/Regulation of Gene Expression in Prokaryotes/Regulation of Gene Expression in Eukaryotes/Mutations/ Cancer/Genetic Disorders/Trends in Genetics/Bibliography/Glossary/ Index.

Audience – M.Sc. in Life Sciences, Genetics, Biotechnology and recombinant DNA technology and related areas.

Cellular and Biochemical Sciences

Editor

G. Tripathi



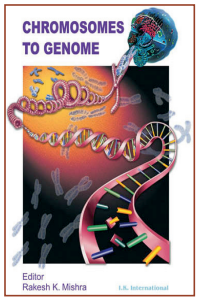
ISBN: 978-81-88237-85-2/Year 2010
Size 18 cm × 24 cm/Pages 1392
Paperback/₹ 795.00

(See on page 178)

Chromosomes to Genome

Editor

Rakesh K. Mishra



ISBN: 978-93-80026-21-3/Year 2009
Size 18 cm × 24 cm/Pages 226
Hardback/₹ 1195.00

Increasing number of complete genome sequences in the past decade has enhanced our understanding of chromosomal basis of genetic inheritance to molecular level. *Chromosomes to Genome* presents the historical perspective as well as the current state of this journey from chromosomes to genome.The book presents complex topics in a simplified manner that is accessible to any student of biology. Each chapter provides a historical account of the field and reviews the recent work in this area,puts the subject in appropriate perspective and makes reading enjoyable. The book provides 'genomic account' of evolutionary history of emergence of complexity from simple living systems. It also gives glimpses of intricate regulatory mechanisms that act on genomic information during differentiation of different cell types.

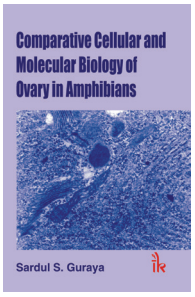
Each chapter is written by well-known practising scientists leading very active and competitive groups engaged in unravelling the secrets hidden in the complex trail of DNA double helix in the immensely dense forest of eukaryotic nucleus. Availability of large number of genomes and emergence of new technologies has boosted the speed and scale of research chromosome biology and genomics to an unprecedented level. Each chapter reflects this dynamic and exciting aspect. From how genome is packaged within the nucleus to bring out complexity of eukaryotic gene regulation to how when anythinggoes wrong with thisprocess disease conditions set in, this book covers landmark aspects of modern biology of genetic inheritance. While it serves as valuable reference for experts as well as students in the field of the book is also accessible to those with more general interest in biology.

Contents:

Snake's Eye-view of Adam and Eve: From Chromosomes to Genome/ The Neglected Parts of the Genome: Half a Century of Satellite DNA/ Genome to Epigenome/Coordinated Demethylation and Methylation of Histones Controls Heterochromatin formation and gene silencing in *Drosophila*/Regulation of Higher Order Chromatin Organization and Function/Azoosperima factor (AZF) genes function for human male fertility/Hormonal signaling via nuclear receptors/Genomics of human sarcomas/Telomere dynamics in aging and cancer/Genetic basis of tropical calcific pancreatitis: Similar finds, different minds/ Human genetic variations in India: Origin and disease perspectives/ Heterochromatin on human Y-chromosome reveals new paradigms in regulation of gene expression in eukaryotes/Index.

Audience – Postgraduate and Research Students of molecular biology, cytogenetics and genomics.

Comparative Cellular and Molecular Biology in Ovary in Amphibians

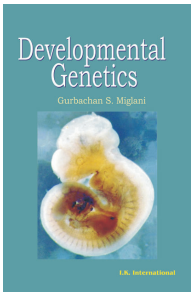


Sardul S. Guraya

ISBN: 978-93-81141-06-9/Year 2011
Size 16 cm × 24 cm/Pages 128
Hardback/₹ 595.00

(See on page 228)

Developmental Genetics



Gurbachan S. Miglani

ISBN: 978-81-88237-59-3/Year 2006
Size 16 cm × 24 cm/Pages 782
Paperback/₹ 595.00

Development is behind what one looks like. It is directed by genes, the units of heredity, which are made up of deoxyribonucleic acid (DNA) in all animals (including man), plants, microorganisms and most of the viruses except in some viruses where ribonucleic acid (RNA) is the genetic material. *Developmental Genetics* integrates the two disciplines of development and genetics into one.

Salient Features:

- Each chapter begins with a brief introduction and historical background.
- The text explains both classical and recent material.
- Various phenomena of developmental genetics explained with examples of animals, plants, bacteria and viruses.
- Text explained with suitable examples, illustrations, tables and figures.
- List of references and review questions given at the end of each chapter.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

- Exhaustive glossary, author index and subject index given at the end of the book.

This book is essential reading for postgraduates in developmental genetics, teachers teaching this subject and developmental biologists conducting research in this area. It is also suitable for candidates preparing for ARS/UGC NET examination.

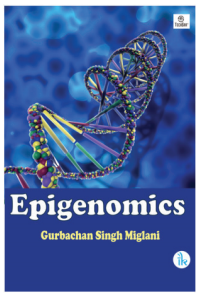
Contents:

Introduction/Inheritance of Developmental Differences/Genome Constancy in Development/Nucleus and Nucleo-Cytoplasmic Interactions/Gene-Protein-Phenotype Relationship/Gene Regulation and Differentiation/Cells in Development/Cell-Specific Gene Activation and Tissue Differentiation/Plant Embryology/Gamete Formation, Fertilization and Cleavage in Animals/Early Development in Animals/Dosage Compensation and Sex Determination/Ageing and Apoptosis/Pattern Formation and Epigenetics/Morphogenesis/ Homeosis/StemCells/Signal Transduction/Recent Progresses in Developmental Genetics/ Synthesis/Glossary/ Bibliography/Author Index/Subject Index.

Audience – Postgraduates in developmental genetics, developmental biologists candidates preparing for ARS/UGC NET examinations.

Epigenomics

New



Gurbachan Singh Miglani

ISBN: 978-93-90620-72-2/Year 2023
Size 18 cm × 24 cm/Pages 528
Paperback/₹ 2995.00

Epigenomics deals in detail with the concepts, principles, procedures, developments, limitations, advantages, applications and future prospects of different areas of epigenomics in a comprehensive manner. It provides concise yet complete knowledge on the many aspects of the basic and most recent methods and applications in epigenomics, a branch of epigenetics that deals with the mechanisms such as DNA modifications, histone modifications, RNA modifications, small and long non-coding RNAs, chromatin remodeling, which are involved in epigenetic control of gene expression without involving variations in DNA sequences. These regulatory mechanisms lead to phenotypic variations. These epigenetic mechanisms can be exploited for crop improvement and cure of human diseases. Epigenomics strives to understand the role of epigenetic marks (chemical tags) in the development of phenotype. This understanding provides epigeneticists to apply epigenomics in medicine and agriculture.

Self-explanatory adequately labelled figures have been the special emphasis throughout.

This book is primarily designed for senior undergraduate and graduate level (M.Sc. and Ph.D.) students studying epigenetics in conventional, agricultural and medicinal universities. This book will be a useful reference text for teachers and researcher in any discipline of life sciences, agricultural sciences, medicine, and biotechnology.

Salient Features:

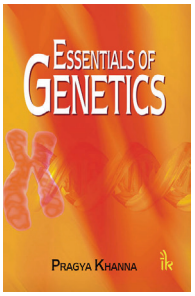
- Thought provoking problems listed at the end of each chapter to test comprehension
- Nobel Prize winning work finds a special mention
- Based on original research papers and review articles
- Useful for national and international level competitive examinations, entrance tests, and interviews

Contents:

1. Introduction/2. DNA Methylation Analysis/3. Histone Modification Analysis/4. RNA Modification Analysis/5. Epigenetic Analysis/6. Epienetic Profiling and Epigenetic Landscape/7. Epigenomics/8. Epigenomes/9. Epigenome Editing/10. RNA Editing and its Programmability/ 11. Epitranscriptomics/12. Applications of Epigenomics Glossary/Index

Audience – MSc andPhD Students in Agricultural and Medicinal Universities

Essentials of Genetics



Pragya Khanna

ISBN: 978-93-80026-34-3/Year 2010
Size 18 cm × 24 cm/Pages 492
Paperback/₹ 505.00

The book covers both the classical and molecular fields of Genetics to enable the students to form an integrated overview of the genetic principles. During the past couple of decades the science of Genetics has grown at an unprecedented pace and the purpose of this book is to provide up-to-date basic information on the subject that emphasizes the multifaceted complex questions of life. The chapters are descriptive, explicit and provided with relevant material that is organized in a way so as to provide logical and consistent transition of classical genetics into modern genetics.

It discusses all the aspects of current research in Genetics, Developmental Biology and Genomics. The explanations are clear, lucid and straightforward, with diagrams and plenty of illustrative examples. A pleasant touch is the appearance of a scientoons relating to the text at the end of each chapter.

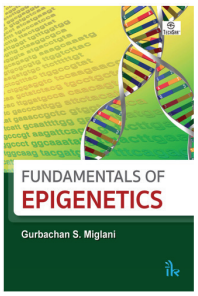
Contents:

Introduction to Genetics/Structure and Organization of Chromosomes/Cell Mechanics/Genetic Material: Properties and Replication/Function of Genetic Material/Mendelian Genetics/ Sex Determination and Sex Linkage/Extrachromosomal Inheritance/ Variations in Chromosome Structure/Variation in Chromosome Number/Mutations/Variationsin Expression in Prokaryotes/ Regulation of Gene Expression in Eukaryotes/Genetic Control of Metabolism/Cancer/Human Genetics/Genetic Engineering and Biotechnology/Current Trends and Future Prospects in Genetics/ Glossary/Bibliography/Index.

Audience – Graduate and Postgraduate students of Botany, Zoology, Genetics, Human Genetics, Medical Genetics, Molecular Genetics and Molecular Biology.

Fundamentals of Epigenetics

New



Gurbachan S. Miglani

ISBN: 978-93-90620-97-5/Year 2023
Size 18 cm × 24 cm/Pages 728
Hardback/₹ 3995.00

Fundamentals of Epigenetics provides concise yet complete information on the many aspects of the basic and most recent concepts in epigenetics, a branch of life science that deals with the mechanisms such as DNA modifications, histone modifications, RNA modifications, small and long non-coding RNAs, chromatin remodeling, which are involved in epigenetic control of gene expression without involving variations in DNA sequences. These regulatory mechanisms lead to phenotypic variations. These epigenetic mechanisms can be exploited for crop improvement and cure of human diseases.

This book is primarily designed for undergraduate and graduate level students studying epigenetics in conventional, agricultural and medicinal universities. Teachers and researchers in any discipline of life sciences, agricultural sciences, medicine, and biotechnology, molecular epigenetics and biotechnology will also find it useful as a reference book.

Salient Features:

- A brief historical background for every chapter
- A concise yet complete treatise covering all essential aspects of epigenetics
- Up to date progress in the subject discussed
- Nobel Prize winning work finds a special mention
- Based on more than 3100 references.

- Supported by 27 tables and 186 figures
- Includes glossary comprising of 550 terms carefully defined in context of the present-day knowledge in the subject
- Thought provoking problems listed at the end of each chapter
- Applications, implications, advantages, disadvantages, limitations, and future prospects of various discoveries and methodologies
- Useful for national and international level competitive examinations, entrance tests, and interviews
- Detailed subject index

Contents:

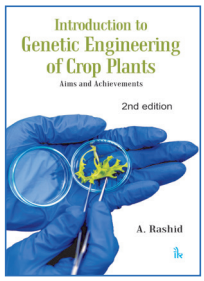
1. Introduction to Epigenetics/2. DNA Modifications/3. Histone Modifications/4. Functions of Histone Modifications/5. DNA, Histone and Nonhistone Protein Modifications in Gene Expression/6. RNA Modifications in Gene Expression/7. Epigenetic Modifiers/8. Epigenetic Crosstalk and Epigenetic Signals/9. Epigenetic Inheritance/10. Long and Small Non-coding RNAs/11.MicroRNAs and Short Interfering RNAs/12. RNA-Directed DNA Methylation and Epigenetic Reprogramming, Learning and Memory/13. Chromatin Remodelling/14. Epigenetic Control of Gene Expression/15. RNA Interference/16. Epigenetic Gene Silencing/17. Epigenetics in Crop Improvement/Glossary/Subject Index

Audience – Graduate & Postgraduate of Agriculture Science

Introduction to Genetic Engineering of Crop Plants Aims and Achievements

Second Edition

A. Rashid



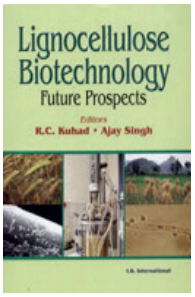
ISBN: 978-93-86768-44-5/Year 2019
Size: 16 cm × 24 cm/Pages 324
Paperback/₹ 525.00

(See on page 167)

Lignocellulose Biotechnology
Future Prospects

Editors

R.C. Kuhad • A. Singh



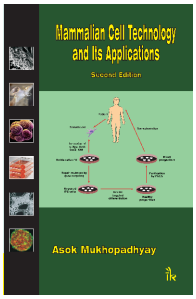
ISBN: 978-81-88237-58-6/Year 2007
Size 18 cm × 25 cm/Pages 400
Hardback/₹ 1495.00

(See on page 192

Mammalian Cell Technology & Its Applications

Second Edition

Asok Mukhopadhyay



ISBN: 978-93-84588-45-8/Year 2016
Size 16 cm × 24 cm/Pages 404
Hardback/₹ 1745.00

Animal cell technology has made tremendous progress in human healthcare. With the advent of recombinant DNA and hybridization technology it is now possible to manufacture many complex therapeutic proteins using animal cells, which otherwise could not be produced or isolated from natural sources. Another form of products where cells are directly involved is regenerative medicine and tissue engineering. Hence, the future of healthcare relies on the progress on these new endeavors of animal cell technology.

Broadly divided in four sections and sixteen chapters this book is meant for the diverse background of students starting from the basic biology to the bioengineering discipline. Since, animal cell technology commands proper understanding of cell biology, DNA technology, immunology and bioengineering, the goal of this book is to amalgamate knowledge from these fields and pass on to the readers who intend to start professional carrier in academic or in industrial research.

An animal cell is a unique factory, where thousands of genes are encoded and transcribed; products are translated, and finally processed to biologically active molecules. It is therefore, important to understand inside of a cell, how cellular functions are coordinated, limitation of cells, reasons for proliferation and cellular death. The very first section of the book deals with the basic biological aspects to understand cell and how it functions. The second section offers basic cell culture technology among the readers. This section covers preservation of animal cells, cell culture medium, culture environment, good manufacturing practices and equipment, quantitative analysis, etc. In the third section, recombinant therapeutic proteins, large-scale cell culture, and scale-up processes are discussed. The fourth section provides glimpses of the advanced studies, where therapeutic applications of cells and tissues have been discussed. Embryonic and somatic stem cells, cloning, tissue engineering are the main subjects of this section. Finally, in the concluding section the future perspective of animal cell culture technology has been discussed.

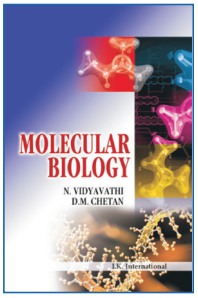
Contents:

Section I: Organization of animal cells and special properties/ Proliferation and death of animals cells: molecular of animals cells: molecular mechanism/Sources of animals cells, preservation and control of cell lines tissues/Design of cell culture media/ Good manufacturing practices, aseptic techniques, and cell culture equipment/Environmental factors and cell culture methods/ Separation of viable cells/Stable gene expression in mammalian cells and monoclonal antibody/Large-scale animal cell culture for the production of the therapeutics/Scaling-up studies in animal cell culture bioreactors

Audience – Student of Cell biology, DNA technology, immunology and bioengineering.

Molecular Biology

N. Vidyavathi • D.M. Chetan



ISBN: 978-81-89866-35-8/Year 2007
Size 14 cm × 21.5 cm/Pages 196
Paperback/₹ 315.00

Covering Molecular Biology from the basics to complex molecular processes and genetic phenomenon followed in both prokaryotic and eukaryotic cells, this book has been significantly structured into thirteen chapters.

Textbook of Molecular Biology is an invaluable Companion for undergraduates and postgraduates throughout their studies.

The present Pioneering textbook emphasizes on the structural details of DNA and its replication with a detailed account on the enzymes involved in the process. A comprehensive account on the understanding of protein synthesis in prokaryotes and eukaryotes has been included. Processing of mRNA, transposons and expression of genes in both prokaryotes and eukaryotes have been discussed in detail with visual understanding. Glossary has been included in appendix for easy reference purposes.

Contents:

Introduction to Molecular Biology/Central Dogma/Genetic Code/ Structure and Forms of Nucleic Acid/Transcription/Protein Synthesis or Translation/Control of Gene Expression in Prokaryotes/ Transposons/Recombination/DNA Damage and Repair/Mutations/ Retrovirus/Retroposons/Glossary/Index.

Audience – Graduate and Postgraduate students of all streams of Life Sciences.

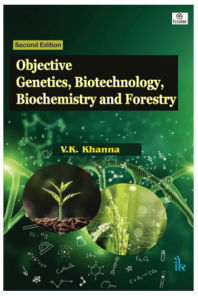
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Objective Genetics, Biotechnology, Biochemistry and Forestry

New

Second Edition

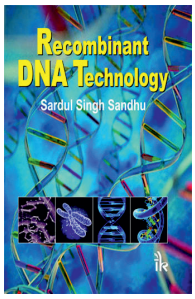


V.K. Khanna

ISBN: 978-93-90620-66-1/2023
Size 18 cm × 24 cm/Pages 532
Hardback/₹ 565.00

(See on page 193)

Recombinant DNA Technology



Sardul Singh Sandhu

ISBN: 978-93-80578-44-6/Year 2010
Size 16 cm × 24 cm/Pages 224
Hardback/₹ 795.00

The objective of the book is to introduce the basic principles and techniques used to make Recombinant DNA. The book commences with an introduction to different tools used for Gene cloning. The final chapters cover the application of Recombinant Technology on current research and provide an inside look on Human Genome Project, Ribozyme Technology, Antisense technology, DNA sequencing, Protein Engineering, Transgenic technology and development of vaccines.

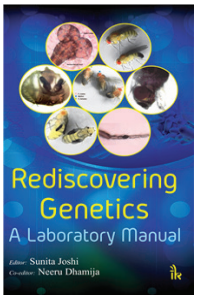
It features summary of chapter in the form of flow charts, highlighting the key points. The book also includes an appendix which provides in depth descriptions of protocols which cover the basic aspects of Molecular biology and glossary defining nearly all the possible terms mentioned in the book.

Contents:

Introduction/Basic Molecular Biology/Handling the Nucleic Acids/ Tools used in Recombinant DNA technology/Recombinant DNA Technology: Biological Aspects/Strategies for cloning/Recombinant Analysis: Selection and Screening/Genetic Engineering in Action/ Appendix: Some Protocols used in Recombinant DNA Technology/ Glossary/Index

Audience – Undergraduates, postgraduates in molecular biology and genetics.

Rediscovering Genetics A Laboratory Manual



Sunita Joshi • Neeru Dhamija

ISBN: 978-93-84588-98-4/Year 2016
Size 18 cm × 24 cm/Pages 246
Paperback/₹ 795.00

"This is a very good student-friendly manual and I strongly recommend for its publication. I praise the efforts of the authors for bringing out such a manual for which nobody thought earlier."

— Dr. Jagat Kumar Roy

Cytogenetics Lab, Banaras Hindu University, India

"This manual combines the study of the most crucial theoretical aspects in Drosophila genetics, discussing a wide spectrum of methods used in the field. Overall, the book is written in a very clear way. It has a consistent and clear structure and the figures and pictures presented are of good quality. I strongly recommend and support the publication of this manual."

— Dr. Hector Herranz

Associate Professor, Department of Cellular and Molecular Medicine, University of Copenhagen, Denmark

Genetics is taught in all life science related disciplines at the undergraduate level. This laboratory manual meant for beginners is an outcome of the authors' attempt made in the last three years (2012-15) of designing experiments to teach the principles of transmission genetics using Drosophila as a model system. The purpose of Drosophila Resource Centre was to demonstrate the ease of learning genetics through experimentation. Wherever required the existing approaches have also complemented the new effort.

The experiments are designed to teach the basic principles of genetics in a one-semester course. More than 90% of the exercises were conducted using a handful of Drosophila mutants. Most of the exercises are organized in a similar fashion covering 6-8 pages. Each exercise provides background information with supporting examples from literature; protocol; observations and calculations (if any) and finally results and discussion.

Salient Features:

- It will bridge the existing gap generally faced in teaching genetics.
- It is user friendly. Students can independently initiate crosses, analyze and interpret the underlying genetic principle.
- The manual will serve as a starting point for those who wish to teach genetics through experimentation.
- Each exercise discusses actual data generated by students in the past three years.

Contents:

Exercises

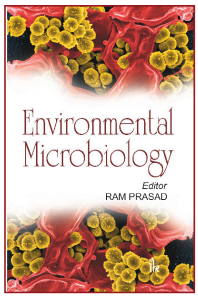
1. Maintenance and culturing of Drosophila
2. Sexing and collection of virgin females
3. To study the life cycle of Drosophila melanogaster
4. To study mutant phenotypes of Drosophila melanogaster
5. To demonstrate Mendel's law of segregation and dominance
6. To demonstrate Mendel's law of independent assortment
7. To study the inheritance of white eye colour in Drosophila
8. To map sepia and curl mutants by recombination mapping
9. To demonstrate absence of crossing over in Drosophila males
10. To establish dominance relationship between multiple alleles of a gene
11. To demonstrate that the white-eyed flies have a deposition defect
12. To perform cis-trans test of allelism with the given eye colour mutants
13. To demonstrate dosage compensation in Drosophila melano-gaster
14. To create a Bar and apricot eyed double mutant
15. To detect recessive lethal alleles in genetic crosses
16. To study the penetrance and expressivity of serrate and vestigial wings in Drosophila melanogas
17. To study the characteristics of X-linked dominant traits
18. To separate eye pigments (pterins) by thin layer chromato-graphy
19. To prepare stained squashes of salivary glands showing well spread polytene chromosomes
20. To demonstrate recombination within a gene
21. To determine the inheritance pattern of white eye colour and vestigial wings from the F2 data
22. To dissect the malphigian tubules, brain and imaginal discs from the third instar Drosophila larva
23. To analyse using bioinformatic tools Drosophila as a model system (Toll 9 gene) for human diseases (asthma)
24. To test for PTC tasting in a random population and to calculate allele and genotype frequency using Hardy Weinberg law
25. To determine the ABO blood groups in a random sample and calculate the allele frequency using Hardy Weinberg law

Appendix I

Appendix II

Audience – All UG students of biosciences who need to do lab experiments in genetics

Environmental Microbiology



Editor

Ram Prasad

ISBN: 978-93-84588-52-6/Year 2016
Size 16 cm × 24 cm/Pages 338
Hardback/₹ 2995.00

Environmental Microbiology highlights the interrelatedness of microbes with life and the environment. It explores the beneficial impact that microbes have on agriculture and food processing, as well as the environment. Further, it goes on to discuss some of the negative impacts that microbes have on our world, such as their role in causing diseases.

This book incorporates the most recent advances in environmental microbiology. The overall objectives of the text are (a) to define the important microbes involved in environmental microbiology; (b) explore the nature of the different environments in which the microbes are situated; (c) the methodologies used to monitor the microbes and their activities and, (d) to evaluate the success achieved in the application of microbes in solving environmental problems through manipulation of their activities.

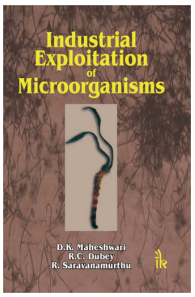
With its focus and coverage, this text is an essential reading for undergraduate, postgraduate and research students in environmental microbiology studies, and to serve as a reference resource for scientists, professionals and engineers interested in this field.

Contents:

Evolutionary History of Microbiology/Prospects of Vermicompost for Organic Cultivation in India/Role of Blue Green Algae in Environment Management/Medicinal Plants for Microbial Control/ Microorganisms and Role in Sustainable Environment/Fluoride Tolerant Microorganisms and their Possible Role in Bioremediation/ PGPR Bio-inoculants for Sustainable Crop Production/Mass Production of Arbuscular Mycorrhiza/Physicochemical and Bacteriological Studies of Wetland Soils of Keoladeo National Park, Bharatpur, Rajasthan/Production of Bacterial Proteases Using Agro-industrial Wastes by Statistical Experimental Designs/ Adverse Effect of Indiscriminate use of Chemical Pesticides and its Alternative Eco-friendly Means for Management of Diseases and Pests Infecting Agricultural Crops/Arbuscular Mycorrhizal Fungi and its Interactions with Environment/Arbuscular Mycorrhiza as Bioprotectant: A Review of the Mechanisms Involved/Resistance: Origin, Evolution and Challenges in Future/Algae and Wastewater Remediation: Current and Future Scenario

Audience – UG and PG students of biology, environmental science, microbiology, biotechnology, ecology and environmental engineering. Researchers in these areas, scientists, engineers.

Industrial Exploitation of Microorganisms



Editors

D.K. Maheshwari • R.C. Dubey
R. Saravanamuthu

ISBN: 978-93-80026-53-4/Year 2010
Size 18 cm × 24 cm/Pages 448
Hardback/₹ 1595.00

This book embodies 21 review articles contributed by subject experts of various areas of industrial microbiology. The articles are devoted to pharma industries, food and enzyme industries, textile industry, agro-industry and cottage industry.

Yeast is one of the important microorganisms which have been used to produce beverages, alcohols and fermented food commodities for a very long time. In recent years, it has been the first choice among eukaryotes to use in recombinant technology. Yeast and Spirulina are being used and marketed as Single Cell Protein (SCP). Mushrooms have been used by humans down the ages. In addition to a rich source of mycoprotein, they have medicinal values also against many ailments. Number of bioactive novel compounds is increasing with the discovery of microbial species and newer groups of microorganisms.

Some chapters are devoted to microbial bioinoculants used as biofertilizers because they are rich source of nitrogen and phosphorus for both legumes and non-legumes. They are being manufactured and sold in market with different trade names. In addition, several microbial enzymes have been produced and commercialized by various industries, but highly active and potential enzymes produced through recombinant DNA technology hold much importance. For example, microbial proteases find application in detergent leather, food and pharma industries and provide eco-friendly technology for bioremediation. Laccase has been worked out to be a good tool for bioremediation of non-degradable wastes and xenobiotic chemicals. Besides, laccase-based biosensors have also been constructed which can be used for phenol determination, monitoring of lignin and plant flavonoids.

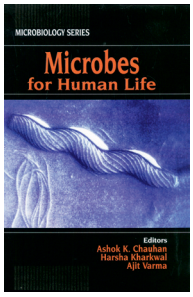
Various microbial phytases as feed supplemented have been used in freshwater and marine aquaculture for improving the growth performance of fishes. Nowadays aquaculture is growing rapidly to meet increasing food demand throughout the world for high quality fish. More than 16,000 bioactive compounds have been isolated from actinomycetes alone including antibiotics, enzymes, vitamins, amino acids, siderophores and nanoparticles. Biosynthesis of nanoparticles by bacteria, actinomycetes and algae has been reported and work is being done nationally and internationally.

Contents:

Biotechnological Potential and Industrial Application of Yeast/Probiotics Microorganisms/Spirulina: Its Role in Food Industry/ Microbial Biopesticides/Biotechnological Potentials of Cyanobacteria and their Industrial Applications/ Biotechnological Potentialities of Higher Fungi/Cordyceps sinensis (Yarha gamboo): A High Value Medicinal Mushroom/ Biotechnological Application in Textile Industry Antimicrobial Textiles/Applications of Streptomyces sp. in Pharmaceutical Industry/Microbial Proteases and their Applications/Proteases: Significance and Applications/ Electrocatalytically Active Laccases: Application for Biosensor Development/Potential Applications of Microbial Phytases in Aquaculture/Laccase Regulation and Laccase-Dependent Bioremediation/Biotechnological, Genetic Engineering and Nanotechnological Potential of Actinomycetes/Strategic Synthesis of Nanoparticles by Mycetes/Discovery of Bioactive Molecules from Plants and Microorganisms/Agro-industrial Bioprocessing of Tropical Root and Tuber Crops–Current Research and Future Prospects/Pharma-active Compounds of Microbial Origin and their Diversity/Industrially Useful Microbial Bioresources/ Antimicrobial Properties of Essential Oils and their Potential Applications in Pharmaceutical Industries/Index.

Audience – Students & research scholars of Botany and Agriculture.

Microbes *for Human Life*



Editors

Ashok K. Chauhan •Harsha Kharakwal
Ajit K. Varma

ISBN: 978-81-89866-05-1/Year 2007
Size 16 cm × 25 cm/Pages 694
Hardback/₹ 2995.00

Microbes for Human Life elaborates the relevance of microbes and their role in everyday human life, microbes in food production and agriculture, in biotechnology and industry, and in ecology and environment. It also discusses some of the negative impacts of microbes on our world, such as their role in causing diseases and bio-terrorism. But the primary focus is on how microbes, in their incredible variety, are essential to human life. The book presents the many ways in which we intentionally, and at times unintentionally, utilize microbes to improve our lives and enhance our life experience.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

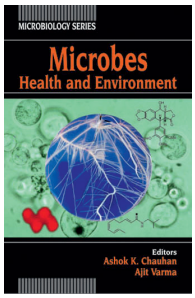
+91-011-43205400
info@ikinternational.com

Contents:

Historical Developments of Microorganisms for Human Health/ Medicinal Plants for Human Life/Herbal Drugs and Nutraceuticals in 21st Century Healthcare/ Beneficial Microorganisms: Herbal and Medicinal Plants/Fermented Foods for Human Life/Yogurt for Human Life/Native Fermented Foods/Emerging Infectious Diseases in Humans/Microbial Diversity in Heavy Metal Remediation/ Microbial Management of Pollutants from Textile Industry/The Odyssey of Human Malaria Parasite – Past, Present and Future/ Global Review on Malaria: Impact on Human Life/ Bird's Flu: A Pandemic in Waiting/Molecular Biology of the SARS Virus/Search for Ever Elusive "Guardian Angel" Novel Antibiotic: Myth or Reality?/Multidrug Resistant Tuberculosis – An Emerging Problem/ *Mycobacterium tuberculosis*: Pathogenesis and Strategy for Prevention/ *Helicobacter pylori* Infection: Diseases and Cure: A Molecular Approach/Pathogenesis of *Salmonella typhi* and Typhoid Fever: Multiple Drug Resistance, Vaccines and Therapeutics/ *Candida albicans* – Taxonomy and Ecology/*Candida albicans* – Morphological Diversity and Metabolic Regulation/*Candida albicans* – an Opportunistic Pathogen – Their Management/Potential of Microbial Enzymes in Therapeutics/Combating Multidrug Resistant Infectious Microbes: A Burgeoning Problem/Proteomics and Genomics Approach to Study Plant–Microbe Cross Communication/Omega-3/6 Polyunsaturated Fatty Acids, Essential to Human Health, from Thraustochytrids.

Audience – Postgraduate and Research Students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology.

Microbes
Health and Environment



Editors

Ashok K. Chauhan • Ajit Varma

ISBN: 978-81-88237-51-7/Year 2006
Size 16 cm × 25 cm/Pages 448
Hardback/₹ 1995.00

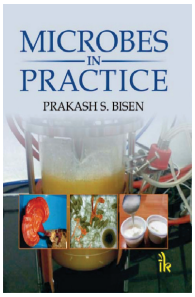
Microbes: Health and Environment highlights the interrelatedness of microbes with life and environment. It stresses that microbes have a beneficial impact on human life and environment. It covers the various aspects of microbes such as molecular biology, interrelationships, microbial intervention in our environment, microbial biotechnology, genetics, their immunology, biochemistry, economic importance, interaction with medicinal plants, human beings, industrial relevance, influence on our health and so on. It is an asset for enterprising students, teachers and scientists.

Contents:

Impact of Microorganisms on Environment and Health/Synergism between Medicinal Plants and Microbes/*Gloriosa superba* L.: Biology and Biotechnological Strategies for Conservation/Antimicrobial Activity of Some Ayurvedic Plant Drugs: An Appraisal of Evidence Based Researches/Cyanobacteria for Soil Health and Sustainable Agriculture/Cyanobacterial Secondary Metabolites: Emerging Trends and Prospects/Interactions between the Physical and Biological Environment in Relation to Soil Health/*Clostridium botulinu*: The Source of Bioterror and Beauty/Forms and Functions of Plant Growth Promoting Rhizobacteria/Microbial Population and Biomass C and N in the Rhizosphere of *Albizia lebbeck* L. and *Gmelina arborea* Roxb. in a 'Jhum' Fallow in Northeast India/Effect of Co-inoculation of AM fungi and *Bradyrhi-zobium japonicum* on Nodulation, Nitrogen and Phosphorus Content in Soybean/Fungal Protoplasts: Impediments on Biotech-nology/Fungal Phytases in Ameliorating Nutritional Status of Foods and Combating Environmental Phosphorus Pollution/Intervention in Arsenic Rich Environment/Applications of Alkalistable, Thermostable and Xylanostable Enzymes in Paper Industry/Bioleaching and Microbial Mineral Degradation/ Environmental Benefits of Xylanase-Assisted Prebleaching of Kraft Pulps/Index.

Audience – Postgraduate and Research Students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology.

Microbes in Practice



Prakash S. Bisen

ISBN: 978-93-82332-96-1/Year 2014
Size 18 cm × 24 cm/Pages 1332
Paperback/₹ 2095.00

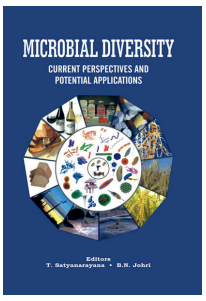
Microbes in Practice deals with almost every aspect of human existence, identifies several important technologies now used that are critical to fulfilling the potential of microbes. Microbiology impinges mostly with the large group of fungi, bacteria and viruses which equal in diversity and physiological phenomena the more traditional group of organisms within the disciplines of botany and zoology. During recent years the study of microorganisms has contributed important insights into the basic problems of biology. Because of their ease of manipulation, rapid growth, highly developed capacity for adaptation, and other properties, microorganisms are one of the preferred objects of research in biochemistry and genetics. The topics and the techniques described in the book reflect this diversity. The methods described are in simple language supplemented with sufficient illustrations and various media composition. The chapters have been made complete by giving the expected results and flow charts to make experiments easier and enjoyable. The subject matter and the results are illustrated with line diagrams in a lucid manner. Beginning with the characteristic difference between prokaryotes and eukaryotes and classification of microorganisms the book depicts the various methods employed to characterize and cultivate different forms of microbes, different media used and various procedures involved with the isolation and characterization of microorganisms. Several staining procedures, chemical compositions of media, biochemical tests, medical microbiology and immunology, microbes in relation to plants, waste management, industrial application, aquatic environment and soil has been compiled at one place in different chapters. Separate chapters have been formulated for dairy and food microbiology and medical microbiology and immunology with application of membrane filter technique, standard plate count at several places. Mushroom cultivation technology has been described in depth. The exercises have been formulated by keeping in mind the hazards of chemicals and only those exercises are given which minimize the exposure of students to potentially pathogenic organisms and hazardous chemicals.

Contents:

Microbial world/Preservation and culture collection of microorganisms/Culture medium/Sterilisation/Microbial growth/ Microbial staining/Biochemical tests/Microbial taxonomy/ Microbial phylogeny/Prokaryotes/Eukaryotes/Biology of viruses/ Identification of microbes/Microbial genetics/Soil microbiology/ The aquatic environment/Air microbiology/Microbes and plants/ Medical microbiology and immunology/Microbes in waste management/Microbes in food and dairy production/The industrial uses of microorganism.

Audience – Undergraduate & postgraduate courses in Microbiology.

Microbial Diversity
Current Perspectives and Potential Applications



Editors

T. Satyanarayana • B.N. Johri

ISBN: 978-81-88237-43-2/Year 2005
Size 18 cm × 25 cm/Pages 1164
Hardback/₹ 3495.00

Microbial Diversity: Current Perspectives and Potential Applications is woven around the recent global perceptions of microbial diversity in its all embracing facets. Diversity perspectives are discussed in the

context of ecosystem dynamics, taking into consideration environments that are rather unique to microorganisms. Considerable thrust is placed on the role that microorganisms play in sustainable production systems. Microbe-plant interaction arena is highlighted through the discussion of mycorrhizal partners, on which depends not only the plant community structure but also abatement of abiotic and biotic stresses. Other mutualist, rhizobia gets its due coverage whereas plant disease component carries examples from both, fungal and viral disease point of view. Considerable emphasis is placed on a discussion of the environmental issues such as the approaches that will lead to newer bioremediation technologies. No discussion of microbial diversity is complete without their implications in animal and human health. Discussed in this context are L-arginases in cancer therapy as also bioactives from cyanobacteria. Genomics and pathogenicity of two groups of viruses, viz., blue tongue and flaviviruses is highlighted whereas keratinophilic fungal forms are discussed in the context of dermatophytic infections.

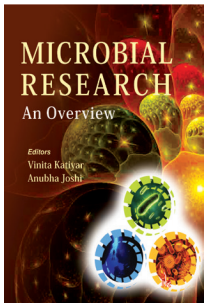
This volume also carries a fair number of articles on commercial microbiology.

Contents:

Section 1: Microbial Diversity and Ecosystem Dynamics : Microbial diversity and molecular basis of cold adaptation in antarctic bacteria / Discovery of novel microorganisms and genes from extreme environment by the genomic technique / Environmental genomics : exploring and exploiting the 'unculturable' microbial diversity / Diversity and adaptations of deep-sea microorganisms / Phylogenetic and metabolic diversity of thermophilic prokaryotes with different types of anaerobic respiration / Halophilic thermophiles: a novel group of extremophiles / Molecular analysis of microbial community to enhance performance of anaerobic digestors / Diversity of Fungi in Mangrove Ecosystems / Sequence analysis of internal transcribed spacer region for phylogenetic assessment of ascomycetous yeasts / Diversity among cellulolytic fungi / Microbial Diversity and Community Dynamics of Mushroom Compost Ecosystem / Fungal endophytes of tropical plants: a critical review / Arbuscular mycorrhizae in natural ecosystem: Incentives in diversity and ecology / **Section 2: Microbial Diversity and Agriculture & Forestry:** The rhizosphere: a hot spot of bacterial diversity ? / Functional diversity and community structure of microorganisms in anoxic rice soils / Analyzing pseudomonas biodiversity : An easy challenge thanks to siderophore-typing / Algal diversity – from morphology to molecules / Agricultural intensification in tropics – its influence on AM fungi / Genetic diversity of plant growth promoting fluorescent Pseudomonads: PCR-RAPD, ARDRA and rDNA sequence analysis / Transgenic mineral phosphate solubilizing bacteria for improved agricultural productivity / An insight into ectomycorrhizal fungal diversity by using molecular approaches / Mycorrhizal diversity of Zambian ecosystems / Microbial diversity in sustainable agriculture / Biodiversity of cowpea rhizobia (Bradyrhizobium spp.) in Indian soils / Prevention of Plant Diseases by Targeting Fungal Polyamine Biosynthesis / Biocontrol of Macrophomina phaseolina: Prospects and Constraints / Diversity of viruses infecting some agriculturally important crop plants in India / **Section 3: Microbial Diversity in the Environment**: Microbial diversity: Potential applications in bioremediation / Relevance of microbial diversity to environmental biotechnology / Diversity of lin Genes in HCH degrading Sphingobium Species / Dyanamics of microbial community : An environmental perspective / Characterization of alkalophilic bacterial consortium for ex-situ bioremediation of colour and adsorbable organic halogens in pulp and paper mill effluent / Microbes in aquaculture / Prevalence and powers of aquatic fungi / Ecological diversitification in Cyanobacteria / Bioremediation of radioactive waste from nuclear power reactor effluents: Present status and future perspective / Rhizobia and its role in rhizoermediation / **Section 4: Microbial Diversity and Industrial & Food Biotechnology:** Role of glucoamylases in biotechnology / Heterogeniety of xylanases and related enzymes / Diversity of chitinases and their industrial potential / Potential applications of enzymes produced by the species of bacillus and geobacillus / Bacterial alkaline proteases: Recent trends and industrial applications / Diversity of fungal and yeast lipases: Present and future scenario for the 21st century / Diversity of lignin degrading microorganisms, ligninolytic enzymes and their biotechnological applications / Development of biochemical methods for production of aldehydes and organic acids using oxidases and oxidase-producing microorganisms / Microbial production of butanol : Product recovery by extraction / Evaluation of thermotolerance mechanism in thermotolerant yeast for ethanol production / Microbiology of traditional alkaline fermented foods / Phototrophic proteobacteria: Diversity and biotechnological potentials / Biomimetic applications of microbial diversity in nanotechnology: Viruses / The Arxula adeninivorans – based expression platform / Diversity and nutriceutical potential of wild edible mushrooms of Central India / **Section 5: Microbial Diversity and Animal & Human Health:** L-Arginase-A potential enzyme in cancer therapy / Algicidal metabolites from Cyanobacteria: structure, mode of action and regulation of production / Diversity and significance of keratinophilic fungi / Distribution and molecular typing of aeromonas hydrophila isolated from India / Serological and molecular diversity of Yersinia enterocolitica isolated from India / New technology forces microbes to reveal their secrets / Genomics in pathogenicity and diversity of Flaviviruses / Genomic diversity in orbiviruses with particular reference to Bluetongue, Epizootic haemorrhagic disease and African Horse Sickness viruses

Audience – Microbiology, Biotechnology, Environmental Science, Environmental Biology.

Microbial Research
An Overview



Vinita Katiyar • Anubha Joshi

ISBN: 978-93-85909-44-3/Year 2019
Size 18 cm × 24 cm/Pages 516
Hardback/₹ 3495.00

This book, a compilation of 21 chapters, includes research findings and review articles contributed by scientists and researchers in different areas of microbiology. This volume contains review articles on bacterial pheromones, biosensors, various microbial enzymes, industrial biocatalysis, chaperones and proteases, present scenario of tuberculosis, diagnostic techniques for indoor dust enumeration including the human papilloma virus. In a nut shell, it contains useful information about the current hot spots of microbiology, enlisting the latest techniques.

For all those involved in the pursuit of microbial ecology, medical microbiology, industrial microbiology, environmental microbiology and microbial physiology, this volume will prove to be immensely useful and stimulating.

Salient Features:

- Wide gamut of articles spanning microbial physiology, medical microbiology, industrial microbiology, food microbiology, microbial ecology and associations, and so on.
- Up-to-date papers in terms of cited references pertaining to research milestones in the respective area.
- Direct and indirect indications for directions of future research.

Contents:

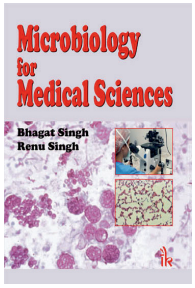
Microbial Bioemulsifiers & Their Roles in the Natural Environment/ Oral Microflora of Snakes/Chaperones & Proteases: The Two Sides of the Hsp100/Clp Group of Proteins/Communal Action of Microbial Cultures for Biodegradation & Decolorization of Textile Dyes: Current & General Aspect/Quorum Sensing & Bacterial Pheromones: A Road to Influence the Local Microbial Environment/Microbial Aspects of Drinking Water/Mushroom Nurturing as Contemporary Alternate Diet/Industrial Biocatalysis: A Green Solution to Environmental Safety and Sustainability/Directed Evolution of Microbial Enzymes: An Update/Important Characteristics of Bacterial Lipases and Its Sources in Different Kinds of Industries/Isolating Potential Microorganisms for Production of Poly-B-Hydroxybutyrate: A Better Option for Biodegradable Plastic/Biosensor: A Logical Instrument/Mycorrhiza: An Ultimate Partnership/Microbes: The Next - Gen Powerhouses/ Human Papilloma Virus Mediated Cancer/Diagnostic Techniques of Indoor Dust: Enumeration and Characterization/The Strategies and Mechanisms Adapted by Bacteria to Combat Oxidative and Reductive Stresses/Understanding Indoor Environmental Microbiome: Application of High-throughput Sequencing Technology/Biomaterial Interaction Profile of Molecular Mechanism Involved in Biophysical Processes: Friccohesity/Present Status and Future Challenges for the Treatment of Tuberculosis: A Review/Biopreservation: Novel Technique Augmenting Shelf Life/Index

Audience – Academicians and researchers in the area of microbiology and microbial research.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Microbiology for Medical Sciences



Editors

Bhagat Singh • Renu Singh

ISBN: 978-93-80578-80-4/Year 2012
Size 18 cm × 24 cm/Pages 466
Paperback/₹ 565.00

This book presents an up-to-date account and recent advances in Medical Microbiology. It attempts a fundamental approach to the subject matter by presenting information necessary to understand the subject. Microbiology for Medical Sciences explains microbiological concepts that apply to health-related profession and many other fields such as Medicine, Dentistry, Nursing, Microbiology, Biotechnology, Medical Lab Technology and Laboratory Biomedical Scientists involved in the care of patients and protection against infectious diseases.

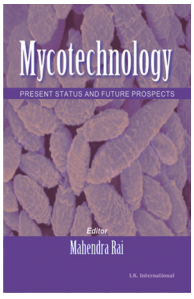
The book contains 66 chapters broadly divided in the following 17 sections.

Contents:

Fundamentals of Microbiology/Techniques and Methods in Microbiology/Immunology for Microbiology/Systematic Bacteriology/A. Infections Caused by Gram-Positive Bacterial Pathogens/ Infections Caused by Gram-Negative Bacterial Pathogens/ Infections Caused by Gram Negative Cocci/Infections Caused by Gram Negative Enteric Bacilli/Infections Caused by Gram Negative Non-Enteric Bacilli/Infections Caused by Mycobacteria/ Miscellaneous Microbes and Fungal Pathogens/Applied Medical Microbiology/Pathogenic Viruses and Associated Diseases

Audience – Medical Students and Paramedical Students.

Mycotechnology
Present Status and Future Prospects



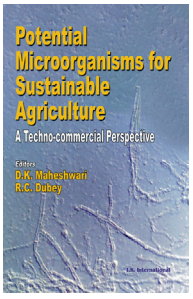
Editor

Mahendra Rai

ISBN: 978-81-89866-08-2/Year 2007
Size 18 cm × 25 cm/Pages 318
Hardback/₹ 1995.00

(See on page 208)

Potential Microorganisms for Sustainable Agriculture
A Techno-commercial Perspective



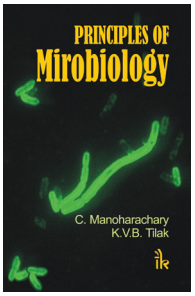
Editors

D.K. Maheshwari • R.C. Dubey

ISBN: 978-81-907462-0-5/Year 2008
Size 18 cm × 24 cm/Pages 500
Hardback/₹ 2445.00

(See on page 175)

Principles of Microbiology



C. Manoharachary • K.V.B.R. Tilak

ISBN: 978-93-80578-19-4/Year 2012
Size 18 cm × 24 cm/Pages 400
Paperback/₹ 425.00

The present book, spread in 19 chapters, broadly deals with basic concepts, historical aspects, microscopy, diversity, cultivation and control of microorganisms, bacteria and viruses at length, nutrition and physiology of microbes, immunology, taxonomy, microbial genetics, and microbes in human welfare and other related aspects.

Contents:

History and Scope of Microbiology/Microscopy/Cell and Cell Organization/Diversity of Microbes/Fungi/Eukaryotic Algae/ Bacteria/Viruses/Growth and Kinetics of Microorganisms/Growth and Kinetics of Algae and Fungi/ Biology and Nutrition of Protozoa/ Cultivation of Microorganisms/Control of Microorganisms/ Microbial Genetics/Molecular Techniques for Monitoring Microbial Systems/Immunology/EnvironmentalMicrobiology/Microorganisms of the Soil and Geochemical Cycles/Microbiology of Food and Industry/Microbes and Diseases in Humans, Plants and Animals/ Utilization and Biotechnology of Microorganisms/Annexure/ Glossary/References/Index.

Audience – Undergraduate and postgraduate students of Microbiology.

Textbook of Environmental Microbiology



Pradipta K. Mohapatra

ISBN: 978-81-90656-67-2/Year 2008
Size 16 cm × 24 cm/Pages 546
Paperback/₹ 475.00

The present book meets the requirements of the undergraduate students of Microbiology, Biotechnology, Life Sciences and Environmental Sciences. It provides the fundamental knowledge on the microbial diversity, processes and applications in the environment. This can also be used as a source of basic knowledge for the researchers in the field of environmental microbiology.

This book deals with:

Microbial approaches to wastewater treatment/Microbial diversity and processes in different habitats/The microbiology of extreme environments/Microbial remediation of wasteland and pesticide contaminated habitats/Microbial interactions in the environment and their role in the environmental processes/Symbiotic interaction of microbes with plants and animals and their role in ecosystem stability/The rhizosphere microbiology and its role in plant productivity/Microbial processes in saline and freshwater habitats/ Microbial mobilization of nutrients with special reference to the mobilization of nitrogen and phosphorus/Advanced methodologies to study the microbial diversity and phylogenetic relationship in the environment/Microbial remediation of the metal contaminated habitats/Microbial mobilization and recovery of valuable metals from low grade ores and diluted solutions/Microbial degradation of recalcitrant pollutants/ Determination of the environmental quality by microbial indication.

Contents:

Scope and Applications of Environmental Microbiology / Microbial Diversity in the Environment / Microbial Diversity and Processes in Freshwater Habitats / Microbes in Marine and Estuarine Habitats / Microbial Diversity of Terrestrial Environment / Microbial Diversity of Air / Microbes of Extreme Environment / Methods in Environmental Microbiology / Ecological Relationships Among Microorganisms / Symbiotic Interactions of Microbes / Microbial Mobilization of Nutrients / Microbial Treatment of Wastewater / Microbes in Metal Pollution Control / Microbial Degradation of Recalcitrant Organic Pollutants / Bioindication in the Environment Reference / Index

Audience – UG students of Microbiology, Biotechnology, Life Sciences and Environmental Sciences.

Textbook of Microbiology



Naveen Kango

ISBN: 978-93-80026-44-2/Year 2010
Size 16 cm × 24 cm/Pages 436
Paperback/₹ 465.00

Textbook of Microbiology provides a structured approach to learning by covering all the important topics in a simple, uniform and systematic format. The book is written in a manner suited to the undergraduate and postgraduate of Microbiology/Industrial Microbiology courses. The language and diagrams are particularly easy to understand and reproduce while answering essay type questions.

Sections I of the book covers essentials of Microbiology including history, scope and milestones in the development of microbiology. This is followed by detailed accounts of characteristics and classification of microorganisms including bacteria, virus, fungi and actinomycetes. Individual chapters on microscopy, isolation and maintenance of microorganisms, microbial growth provide a detailed account of these techniques and their use in microbiology.

Section II of the book covers biochemistry, microbial genetics and some instrumentation including chapters on carbohydrates, proteins, lipids, nucleic acids, gene regulation, translation and transcription along with detailed accounts of spectrophotometry, pH meter and fermenters.

It broadly covers:

Fundamentals of Microbiology / Tools and Techniques used in Microbiology / Basic Biochemistry / Microbial genetics

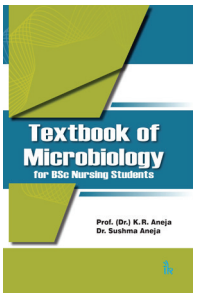
Contents:

Part I-Fundamentals of Industrial Microbiology, Tools and Techniques: History and Scope of Microbiology/Microscopy/ General Characteristics and Classification of Bacteria/General Characteristics of Fungi/General Characteristics of Viruses/ Microbial Growth and Culture Media/Isolation and Maintenance of Microorganisms/Sterilization and Control of Microorganisms/ Instrumentation.

Part II-Principles of Biochemistry and Microbial Genetics: Carbohydrates/Amino Acids and Proteins/Lipids/Enzymes/ Bioenergetics, ATP Generation and Transport of Biomolecules/ Structure and Replication of DNA/ Types and Properties of RNA/ Genetic Code and Protein Synthesis/Gene Regulation/Mutation and Repair/Genetic Recombination in Bacteria/Index.

Audience – B.Sc. Microbiology / Industrial Microbiology.

Textbook of Microbiology for BSc/MSc Nursing Students



Prof. (Dr.) K.R. Aneja
Dr. Sushma Aneja

ISBN: 978-93-90620-59-3/Year 2022
Size 16 cm × 24 cm/Pages792
Paperback/₹ 1225.00

Microbiology is the study of microorganisms that are too small to be seen with the naked eye. Microbiology has proven to be one of the most important disciplines in biology making it possible to identify how some of the organisms could cause disease, discover how to treat them with antibiotics and even use of some microbes for humans diets and industries.

Microbes keep on evolving to cause new diseases. The most recent pandemic outbreaks of the 21st century have been the 2003 SARS pandemic caused by the coronavirus (SARS-CoV-1) and the current ongoing COVID-19 pandemic caused by another coronavirus, SARS-CoV-2. COVID-19 has significantly changed the world.

This textbook has been structured keeping in mind the students. It provides a solid background of the subject of microbiology. Fascinating images and conceptual diagrams have been used that support the text concisely and provide a clear insight into fundamental concepts and understanding of microbes. A unique feature of the book is that every chapter has key points, important questions and MCQs with answers for quick review. It contains up-to-date information about infectious diseases, their causative agents, treatment and preventive measures including vaccines.

The book would prove to be a treasure for the nurses/nursing students of BSc/MSc, faculty and everyone else interested in medicine.

Spread in 80 chapters under five units covering all aspects of microbiology.

Contents:

UNIT I: Introduction: Principles, historical development of microbiology, and its importance to nursing.

UNIT II: General characteristics, classification and identification of microorganisms.

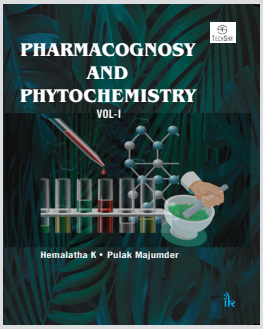
UNIT III: Methods of infection control and role of a nurse in hospital-acquired infections/nosocomial control programme.

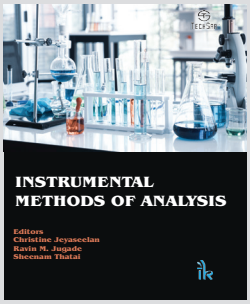
UNIT IV: Disease producing organisms: Bacteria, viruses, fungi, parasites and rodent vectors, and collection of clinical specimens for diagnosis.

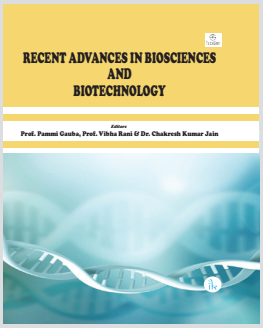
UNIT V: Immunity: Concept, types/classification, serological tests, immunization, and immunization/vaccination schedule.

Audience: Nursing graduates & postgraduates

NEW RELEASES



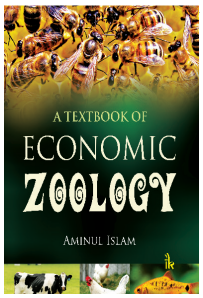




The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

A Textbook of Economic Zoology



Aminul Islam

ISBN: 978-93-84588-80-9/Year 2016
Size 18 cm × 24 cm/Pages 420
Paperback/₹ 625.00

The book is designed mainly to cover the undergraduate and postgraduate syllabi of all the major universities of India and other Asian countries. Each chapter is designed to present the discussion of the topics from the curricula in a crisp and scientific way, accompanied with relevant diagrams. Each chapter is followed by a set of short, descriptive and multiple choice questions which closely follow the trend of questions asked in degree examinations as well as competitive examinations. It also contains a set of key points that would help the students to find answers to the short questions. Recent data on the respective field of Economic Zoology in one hand will satisfy the students and in other hand it will be good hand book for the research scholars. Therefore it fulfils the need for book for academic students as well as research. The book additionally incorporates the recent research developments in the area. Therefore it will satisfy the urge of students to get acquainted with the modern trends in the subject, as well as the traditionally taught topics. Keeping in mind the multidisciplinary nature of Economic Zoology, biology of some of the common disease-causing organisms and bionomics of the arthropod vectors which are intimately associated with the diseases have been incorporated along with the main topics like sericulture, lacculture, apiculture, poultry, fisheries and dairy science, and so on.

Salient Features:

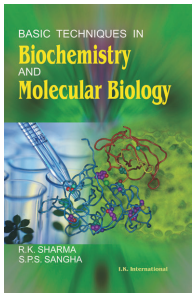
- Comprehensively covers major topics of the syllabi of all major Indian and other Asian countries
- Contents are to the point, up to date, and provided with adequate illustrations
- Each chapter is followed by short, descriptive and multiple choice questions
- Provided with glossary to help the students grasp the short questions and illustrative meaning of the technical words
- It aims to incorporate the questions suitable for competitive examinations.

Contents:

Fishery/Sericulture/Lac Culture/API Culture/Poultry/Cattles/ Medical Zoology/Arthropod Vector Biology/Index

Audience – B.Sc and M.Sc students of Zoology, Researchers and professionals in Economic Zoology.

Basic Techniques in Biochemistry and Molecular Biology



R.K. Sharma • S.P.S. Sangha

ISBN: 978-81-907462-6-7/Year 2009
Size 14 cm × 21.5 cm/Pages 280
Paperback/₹ 345.00

Fundamentals of biochemistry and molecular biology is an important component of all disciplines of Biology.In the era of multidisciplinary approach, the basic techniques in Biochemistry and Molecular Biology are much needed by the students of Botany, Zoology, Microbiology, Biotechnology, Fisheries, Veterinary, Pharmacology, Physiology, Medicine, Genetics, Agriculture and allied subjects both at undergraduate and postgraduate levels.

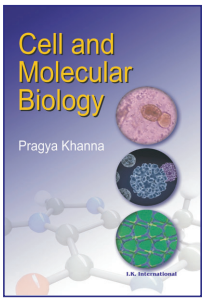
This book includes 15 chapters covering more than 135 experimental protocols. It discusses all the relevant topics like pH and buffers, spectrophotometry, chromatography, carbohydrates, lipids, proteins, electrophoresis, enzyme immunology, vitamins and pigments, metabolites and molecular biology. It includes a wide range of experiments from preparation of culture media to PCR, Southern and Western blotting. All the experiments have been meticulously designed and special care has been taken to the safety in laboratory and precautions are given wheresoever required.

Contents:

General Introduction/pH and Buffers/Spectrophotometry/ Centrifugation and Cell Fractionation/Chromatography/ Carbohydrates/ Lipids/Amino Acids and Proteins/Nucleic Acids /Electrophoresis/Immunology/ Enzymes/Metabolites/Vitamins, Hormones and Pigments/Molecular Biology/Appendices/Index.

Audience – Students of Botany, Zoology, Microbiology, Biotechnology, Fisheries, Veterinary, Pharmacology, Physiology, Medicine, Genetics, Agriculture.

Cell and Molecular Biology



Pragya Khanna

ISBN: 978-81-89866-59-4/Year 2008
Size 16 cm × 24 cm/Pages 400
Paperback/₹ 455.00

Cell biology is a fascinating branch of biological studies, providing answers to hitherto unanswered questions. It is the mother science to areas such as Molecular Biology, Molecular Genetics, Biotechnology, Recombinant DNA technology etc. During the last few decades the science of cell biology has grown at an unprecedented pace with the consequence that voluminous information has accumulated on the subject. *Cell and Molecular Biology* is intended as a textbook for B.Sc. (Hons.) and M.Sc. students of Biology. It is being prepared in accordance with the UGC guidelines.

Contents:

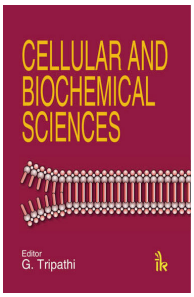
The Cell/Tools and Techniques in Cell Biology/Protoplasm/ Nucleic Acid/Cell Boundaries/Mitochondria/Plastids/Endo-plasmic Reticulum/Golgi Complex/Lysosomes/ Microbodies: Peroxisomes and Glyoxysomes/Ribosomes/Cytoskeleton: Microtubules, Microfilaments and Microvilli/Cilia and Flagella/Centrioles and Basal Bodies/The Nucleus/Chromosomes/Cell Reproduction: Cell Growth and Cell Cycle/Gametogenesis/Fertilization/Genetic Material: Properties and Replication/Protein Synthesis/Genetic Code/Regulation of Gene Expression in Prokaryotes/Regulation of Gene Expression in Eukaryotes/Mutations/Cancer/Genetic Disorders/Trends in Genetics/Bibliography/Glossary/Index.

Audience – M.Sc. in Life Sciences, Genetics, Biotechnology and recombinant DNA technology and related areas.

Cellular and Biochemical Sciences

Editor

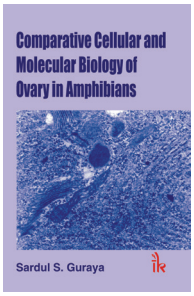
G. Tripathi



ISBN: 978-81-88237-85-2/Year 2010
Size 18 cm × 24 cm/Pages 1392
Paperback/₹ 795.00

(See on page 178)

Comparative Cellular and Molecular Biology in Ovary in Amphibians



Sardul S. Guraya

ISBN: 978-93-81141-06-9/Year 2011
Size 16 cm × 24 cm/Pages 128
Hardback/₹ 595.00

The present book is an up-to-date account of the recent advances in the cellular and molecular changes during diverse ovarian functions in amphibians. The ovarian compartments like developing follicles at different stages of growth, atretic follicles, post-ovulatory follicles, corpora atretica, interstitial cells and stroma have been discussed in relation to their changed cellular and molecular attributes vis-à-vis reproductive phases encompassing environmental stress induced variations in the reproductive success and fecundity. Histochemical, ultrastructural, biochemical and molecular biology of oocyte growth, vitellogenesis, steroidogenesis, oocyte maturation, ovulation, post-ovulatory follicular modulation and their endocrine regulation, have been elaborately explained. It provides comprehensive comparative details of basic and applied aspects of amphibian ovary. This book will be of significance to the scientists and students of reproductive biology, biotechnology, conservation biology and environmental toxicology and system biology. This book is of prime importance for conservation of amphibians.

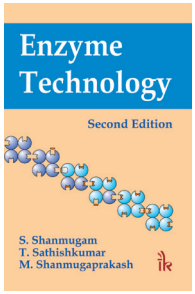
Contents:

Germinal Beds, Oogenesis and Folliculogenesis/Ooplasmic Components/Germinal Vesicle or Nucleus/Vitellogenesis or Yolk Formation/Follicle Wall/Maturation of Oocyte/ Ovulation/Postovulatory Follicles/Follicular Atresia/Index

Audience – Scientists and students of reproductive biology, biotechnology, conservation biology and environmental toxicology and system biology.

Enzyme Technology

Second Edition



S. Shanmugam • T. Sathishkumar
M. Shanmugaprakash

ISBN: 978-93-81141-59-5/Year 2012
Size 16 cm × 24 cm/Pages 248
Paperback/₹ 345.00

What are enzymes? How do they behave? How are they obtained? What are their uses? This book manages to cover all this .... most of the young workers in R&D of biotechnological industries would find it useful for a quick introduction.

— Current Science, Vol. 96, No. 11, 2009.

This book gives a broad account of enzymology and aims to put the current knowledge into perspective. The chapters follow a progression from the properties of isolated enzymes to the behaviour of enzymes in increasingly complex systems, leading up to the cell. Included is the discussion on the importance of enzymes in medicine and industry.

This book discusses the behaviour of isolated enzymes, dealing in turn with isolation methods, structural characterization, kinetics, catalytic action and control of activity, immobilization methods and various applications of enzymes. The methods for isolation and characterization of enzymes are now well-established procedures, so the rate at which three-dimensional structures and mechanisms are being determined is increasing dramatically. Ultimately it is necessary to know the behaviour of enzymes in living cells. This involves in part a synthesis of the information obtained from the study of isolated enzymes, but it also requires detailed knowledge of the molecular morphology of the cell, which in turn requires methods for making measurements on intact cells.

The study and applications of enzymes have assumed increasing importance both in medicine and in industry and a discussion of these aspects is therefore given prime importance.

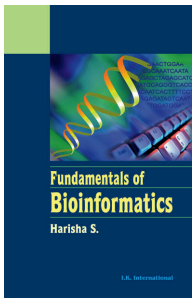
This book will be of immense use to all the UG and PG students of Biotechnology engineering and science students and also to other the sciences students and research scholars.

Contents:

Introduction/Enzyme Classification/Enzyme Extraction and Isolation/ Purification of Enzymes/Enzyme Kinetics/Enzyme Immobilization / Enzyme Applications/Enzyme Biosensors/Index

Audience – UG and PG students of Biotechnology Engineering and Science students.

Fundamentals of Bioinformatics



Harisha S.

ISBN: 978-81-89866-41-9/Year 2007
Size 16 cm × 24 cm/Pages 276
Paperback/₹ 375.00

Bioinformatics is an upcoming discipline of Life Sciences. It is an integration of computer science, and mathematical and statistical methods to manage and analyze the biological data. The fundamental issues that directly impact an understanding of life at structural, functional and molecular level, and regulation of gene expression can be studied by using bioinformatics tools. *Fundamentals of Bioinformatics* is a comprehensive book for undergraduates, postgraduates and research scholars, who urge to learn about theoretical as well as practical aspects of this upcoming field. This pioneering book provides up-to-date information on bioinformatics and emphasizes recent topics like drug design technology, pharmacogenomics, proteomics and genomics. The present textbook will be an asset to Life sciences and technology institutions, since it has been designed based on the prescribed syllabus of various Indian Universities and aboard, and cover all the important topics on Bioinformatics.

Contents:

Bioinformatics/Database/Sequence Alignment and Database Searching/Phylogenetic Analysis/Predictive Methods/Plasmid Mapping and Primer Design/Proteomics and Genomics/Drug Design Methodology/List of Bioinformatics software/GCG Wisconsin Package/Appendix/Index.

Audience – Graduates, Postgraduates and Research Scholars in Bioinformatics.

Fundamentals of Ecology



Dr. Somveer Jakhar

ISBN: 978-81-96579-12-8/Year 2024
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

Ecology is an essential subject for students studying zoology at all universities. This book covers every aspect of ecological theory, from the individual to the ecosystem scale. Strong emphasis is placed on abiotic and biotic variables impacting organisms, adaptations, the ecology of species populations, and interactions between species. The Book provides comprehensive description of community structure and functions, ecological niche ecological succession, ecosystem processes, ecosystem energetics, biogeochemical cycles, biomes, endemism, theory of island biogeography, disturbance, and habitat fragmentation.Significant attention has been paid to the benefits and services provided by biodiversity as well as the problems that pose an unprecedented risk to biodiversity.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

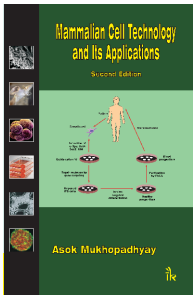
+91-011-43205400
info@ikinternational.com

Salient Features:

- It is written in clear, understandable language and emphasizes the key ideas in plant ecology.
- The text discusses essential ecological principles while addressing practical problems.
- A chapter on restorative ecology discusses the escalating environmental issues and provides doable fixes.
- The last two chapters, Ecology and Wildlife Conservation Approaches for Biodiversity, deal explicitly with the real-world application of ecological knowledge.

Audience – Bsc Hons Zoology

Mammalian Cell Technology & Its Applications



Second Edition

Asok Mukhopadhyay

ISBN: 978-93-84588-45-8/Year 2016
Size 16 cm × 24 cm/Pages 404
Hardback/₹ 1745.00

Animal cell technology has made tremendous progress in human healthcare. With the advent of recombinant DNA and hybridization technology it is now possible to manufacture many complex therapeutic proteins using animal cells, which otherwise could not be produced or isolated from natural sources. Another form of products where cells are directly involved is regenerative medicine and tissue engineering. Hence, the future of healthcare relies on the progress on these new endeavors of animal cell technology.

Broadly divided in four sections and sixteen chapters this book is meant for the diverse background of students starting from the basic biology to the bioengineering discipline. Since, animal cell technology commands proper understanding of cell biology, DNA technology, immunology and bioengineering, the goal of this book is to amalgamate knowledge from these fields and pass on to the readers who intend to start professional carrier in academic or in industrial research.

An animal cell is a unique factory, where thousands of genes are encoded and transcribed; products are translated, and finally processed to biologically active molecules. It is therefore, important to understand inside of a cell, how cellular functions are coordinated, limitation of cells, reasons for proliferation and cellular death. The very first section of the book deals with the basic biological aspects to understand cell and how it functions. The second section offers basic cell culture technology among the readers. This section covers preservation of animal cells, cell culture medium, culture environment, good manufacturing practices and equipment, quantitative analysis, etc. In the third section, recombinant therapeutic proteins, large-scale cell culture, and scale-up processes are discussed. The fourth section provides glimpses of the advanced studies, where therapeutic applications of cells and tissues have been discussed. Embryonic and somatic stem cells, cloning, tissue engineering are the main subjects of this section. Finally, in the concluding section the future perspective of animal cell culture technology has been discussed.

Contents:

Section I: Organization of animal cells and special properties/ Proliferation and death of animals cells: molecular of animals cells: molecular mechanism/Sources of animals cells, preservation and control of cell lines tissues/Design of cell culture media/ Good manufacturing practices, aseptic techniques, and cell culture equipment/Environmental factors and cell culture methods/ Separation of viable cells/Stable gene expression in mammalian cells and monoclonal antibody/Large-scale animal cell culture for the production of the therapeutics/Scaling-up studies in animal cell culture bioreactors

Audience – Student of Cell biology, DNA technology, immunology and bioengineering.

Recent Trends in Composting Technology



Bikas Ranjan Pati
Santi M Mandal

ISBN: 978-93-86768-31-5/Year 2019
Size: 16 cm × 24 cm/Pages 268
Hardback/₹ 1995.00

This book describes the uniqueness of compost at various geographic regions. The importance of process control parameters are described details which are very much meaningful for the preparation of quality compost. Important addition is the technology incorporation to enrich the compost through designing of composting method, selecting appropriate substrate, their proportionate blending and fortification of micronutrients for the site specific application. Extensive role of microbial activities and different types of composting preparation procedures summarized in details. This book uniquely describes how Indian cities become near zero waste following India's six new waste management rules of 2016.

This book provides the updated concepts and technologies in composting manure preparation, and basic knowledge on composting technology and their large-scale management. It also describes a variety of composting types and their beneficial role for both farmers and the ecosystem. The book has been divided into fourteen chapters that balance the composting enrichment process with value addition, top to bottom composting process from raw materials to municipal waste, and their uses in different parts of India. Role of microbial diversity in multistep composting process has been well described. One chapter is dedicated to recent updates on nanofertilizers and their future concerns.

This book is highly relevant to the students of Environmental Studies, Microbiology, Biotechnology, Botany, Zoology, Plant Protection, Agriculture and Agronomy.

Salient Features:

- improvement of soil quality through continuous application of nutrient enriched (phospho-sulfo-nitro) organic compost along with normal quantities of mineral additives.
- process control parameters for the preparation of quality compost.
- technology to enrich the compost through designing of composting method, selecting appropriate substrate, their proportionate blending and fortification of micronutrients for the site specific application.
- nanotechnology as a potential tool to achieve nutrient need to plants for luxuriant growth and minimize disease conditions.
- role of microbial activities and types of composting preparation procedures
- India's new waste management rules of 2016.

Contents:

Enriched Compost: A Boon for Nutrient Starved Agriculture in Northeast India/Composting: Exploitation of Microbial Metabolic Diversity Therein/Soil Enrichment with Polyphenols Rich Composting/Composting Technology in Sugar and Agro-Based Industry-Solution for High BOD Waste and Its Plausible Environmental Impacts/Value Addition in Compost/Nanomaterials as Fertilizers: Types, Advantages and Concerns/Waste Processing and Disposal/Prospects of Vermicomposting/Vermicomposting-A New Vista for Livelihood Generation and Environmental Management: Case Studies from South West Bengal, India/Story of the Unsung Heroes: Exploring the Factors Affecting Composting/An Overview of Biocomposting/Role of Fungi in Composting/Fish Solid Waste Composting: An Alternative Approach for Production of Organic Fertilizer/The Technology behind Composting: Economic Aspects in Agriculture/Index

Audience – Undergraduate and postgraduate students of Environmental Studies, Microbiology, Biotechnology, Botany, Zoology, Plant Protection, Agriculture and Agronomy.

Recent Trends in Life Sciences



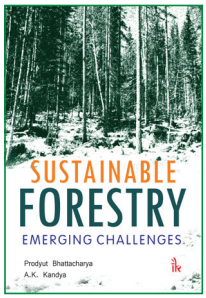
Editors

M.H. Fulekar • R.K. Kale

ISBN: 978-93-82332-25-1/Year 2014
Size 18 cm × 24 cm/Pages 412
Hardback/₹ 3225.00

(See on page 197)

Sustainable Forestry: Emerging Challenges



Prodyut Bhattacharya
A.K. Kandya

ISBN: 978-93-84588-99-1/Year 2017
Size 18 cm × 24 cm/Pages 335
Hardback/₹ 2995.00

Forests are critical for sustainable development, environment and also for livelihood. They provide a wealth of goods and services that are essential for people's lives, cash income and green economy. Maintaining and enhancing our planet's forest resources is essential if we are to succeed in the global efforts to alleviate poverty, address water scarcity and biodiversity loss, and mitigate climate change. Culturally and historically, the intrinsic value of forests, and the spiritual and sacred use of forests have great importance to local communities and our cultural identity. This book on Sustainable Forestry: Emerging Challenges, written by experienced academicians, scientists and other researchers shows the present ongoing initiatives in the country to address sustainable forestry and its management. An estimated 230 million people in India rely on forests for their livelihoods to some degree, including some 60 million indigenous people and other forest-dwelling communities. While more than two billion people - the developing world's population use fodder, biomass fuels, mainly firewood, to cook food and large number of non-timber forest products for their day-to-day needs.

Salient Features:

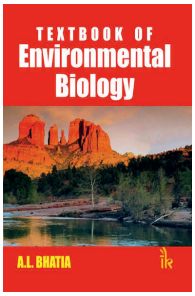
- Aims to make the wide body of collective knowledge and experience about sustainable forest management more accessible to forest managers and other stakeholders.
- A broad, well-researched and up-to-date introduction to many aspects of sustainable forestry.
- Strengthen the meanings and perceptions of SFM against the background of the rapid changes in our natural and social environment.
- Explains the need of integration of Non Timber Forest Products in reference to collection, production, silvicultural technique, transportation, storage, ownership, etc.
- Discusses the ecological status of forest species, endemicity of tree species against the land-use changes of the Achanakmar Amarkantak forests in Central India.

Contents:

Training for Sustainable Forestry in India: Emerging Areas for Holistic Capacity Building/ Forest Certification : Benefits and Issues of Sustainable Forestry/ REDD Plus: Indian Experience towards Sustainable Forestry/ Sustainable Harvesting of Non Timber Forest Products: A Difficult Subject to Achieve/ Pulp and paper industry raw material scenario : ITC Plantation : A case study / Sustainable Management of Natural Gums and Resins in Madhya Pradesh/ Livelihoods Interventions under Joint Forest Management/ Community Oriented Technology Development for Sustainable Forest Resource Management Under Joint Forest Management/ Domestication Status of Non timber Forest products in Madhya Pradesh / Forest products utilization during famine conditions in Raigad district Maharashtra: A case of Thakur tribes/ A study on sustainable harvest of wild medicinal plants of Uttarakhand with a case study on lichens/ The richness and variability of tree species in Achanakmar and Amarkantak forests Central – India/ Assessing carbon sequestration potential of bamboos from Manipur/ Vegetation analysis of Teak-Dipterocarpus forests from Manipur with a note on distribution and diversity/Strategy for Forest Conservation to facilitate Ecosystem services in the context of Climate change/ Afforestation : An effective intervention for sustainable development of fragile desert ecosystem/ Economic management of urban forestry amenities of Chandigarh City, (India)/ Management of Energy Resources in India/ Plant Diversity In Sacred Groves in Madhya Pradesh

Audience – Students, researchers and policy makers in the Forestry sector

Textbook of Environmental Biology



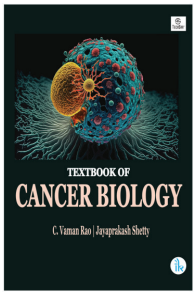
AL Bhatia

ISBN: 978-81-88237-87-6/Year 2010
Size 18 cm × 24 cm/Pages 432
Paperback/₹ 455.00

(See on page 245)

Textbook of Cancer Biology

Forthcoming



C Vaman Rao
Jayaprakash Shetty

ISBN: 978-93-90620-61-6/Year 2024
Size 18 cm × 24 cm/Pages TBA
Paperback/TBA

The term cancer refers to the crab, which has the unique ability to move backwards and forwards, as well as laterally. Based on this character of the crab, the word cancer was coined for the tumour, which shows abnormal growth in all directions. *Cancer Biology* briefly explains the various aspects of cancer development and therapies currently available for cancer treatment. The book divided in five chapters deals with:

- characteristics of cancer cells, classification of cancers based on tissue origin, causative factors of cancer and tumour markers;
- viral origin of cancer, various types of mutations that lead to cancer, Darwinian principle in selection and survival of cancer cells;
- molecular mechanism of involvement of oncogenes in development of cancer, collaboration of oncogenes toward cancer development;
- importance of tumour suppressor genes at molecular level and their mutations leading to development of cancer;
- therapies currently practised like herbal remedies, radiation, chemotherapy, combinatorial therapy, immune therapy and nano therapy;

This book will be a useful text for undergraduate students of Biological Sciences, Biotechnology and Medical Sciences.

Contents:

C. Vaman Rao received B. Sc. Degree in Zoology from the University of Mysore in 1977 and postgraduate degree in Zoology with Genetics specialization in 1979 from the same University from Manasagangotri campus. Joined the staff of St. Xavier's College, Mumbai to teach in the Department of Zoology in 1980. In 1988 obtained Ph.D. degree in Biochemistry (Environmental Toxicology) from University of Mumbai (then it was University of Bombay). In 1989 went to USA to pursue postdoctoral studies in Toxicology in the Department of Pharmacology and Toxicology at the University of Mississippi Medical Centre, Jackson, Mississippi, USA as a postdoctoral fellow in Dr.

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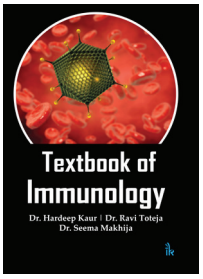
+91-011-43205400
info@ikinternational.com

Harihara Mehendale's lab and gained experience in Liver Toxicology and returned to India in 1991 to rejoin the department to teach the undergraduate students of B. Sc. Zoology and continued the research in toxicology. In 1992 got the recognition as a postgraduate teacher and started teaching the M.Sc. students of Mumbai University and got recognition as Ph. D guide in 1995 from Mumbai University. Served as member of Board of Studies and Board of Examiners in Zoology undergraduate and postgraduate program of Mumbai University from 1995 to 2007. 1995 to 2001 and 2003 to 2007 served as Vice Principal (Academic Improvement) at St. Xavier's College, Mumbai. For the past forty one years has been teaching genetics, biotechnology, immunology, molecular biology and cancer biology. In 2007, joined the Dept. Biotechnology Engineering at Nitte Mahalinga Adyanthaya Memorial Institute of Technology (NMAMIT), Nitte (Udupi Dist.) and continued to teach undergraduate engineering students. Published books, Immunology, 3rd Ed (2017); A Text Book of Immunology, 3rd Ed (2019); Biology for Engineers, 1st Ed (2021); Text Book of Cancer Biology, 1st Ed., in Press. Actively involved environmental toxicology, biofuels research program and published research papers in reputed Scopus indexed journals. At present carrying out research on plant derived antidote for snake venoms. Has been a life-member of the scientific societies like Indian Science Congress, Society of Toxicology-India, Indian Society of Toxicology, Indian Society for Technical Education, Toxinology Society of India.

Dr. Jayaprakash Shetty, MBBS, MD, FRCP (Glasg) graduated from Mysore Medical College, Mysore, Karnataka, India, completed his Postgraduation in Pathology at Kasturba Medical College (Manipal University) Karnataka, India and FRCP (Glasg), [Fellow of Royal College of Physicians - Glasgow, United Kingdom]. Presently he is working as Vice-Dean/ Professor and Head – Department of Pathology K. S. Hegde Medical Academy (Nitte – Deemed to be University) Mangaluru, Karnataka, India. He has illustrious teaching carrier of 24 years, apart from publishing over 120 scientific papers on both National and International Journals. He is the reviewer of the article for Journal of Neurosciences and Rural practice, Editorial Board member for Journal of Pediatric Oncology and Journal of evidence based medicine and health care. He is the recipient of Doctors day award in 2006 from IMA Headquarters, Delhi for the service rendered to Indian Medical Association. He is the member of foundation steering committee India of the UNESCO Chair Bioethical Unit, Haifa. He is been serving as an examiner for Undergraduate, Postgraduate examination in several Universities and National Board of Examination, Delhi (DNB) examinations. As a researcher he has completed a Govt. funded project sanctioned by Vision Group of Science and Technology, the project tilted as "Evaluation of prognostic marker for Triple-negative breast cancer" and currently carrying out Govt. funded ICMR Project. Above all he is loved by his students.

Audience – Biotechnology and Medical Sciences
Shelving – Undergraduate students of Biological Sciences, Biotechnology and Medical Sciences

Textbook of Immunology



Dr. Hardeep Kaur
Dr. Ravi Toteja
Dr. Seema Makhija

ISBN: 978-93-90620-30-2 /Year 2021
Size: 18 cm × 24 cm/Pages 246
Paperback/₹ 675.00

Over the last few decades, immunology has een unprecedented growth in terms of discovery and inventions.

The book, 'Textbook of Immunology' is an attempt to introduce undergraduate students of Zoology, Life Sciences, Microbiology, Biosciences, Medicine and Veterinary Sciences to basic immunology and also to apprise them with the latest developments in the field. An attempt has been made to give complete coverage to all the key topics in immunology without excessive detail or abstract theoretical discussions. The aim of the book is to make the study of immunology accessible yet interesting for the learners.

Salient Features:

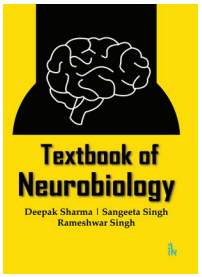
- Each chapter comes with a list of references and web links to encourage students to enhance their knowledge.
- The book includes chapter-summaries, an extensive glossary, quizzes/questions, and a list of relevant abbreviations at the end of each chapter.
- Boxes with topics of special interest are also included in each chapter.

Contents:

Overview of Immune System/Innate and Adaptive Immunity/ Antigens/Immunoglobulins/Major Histocompatibility Complex/ Cytokines/Complement System/Vaccines/Immune Dysfunction/ Summary/References/Index

Audience – B.Sc/ M.Sc Physics/Chemistry/B. Tech.

Textbook of Neurobiology



Deepak Sharma
Sangeeta Singh
Rameshwar Singh

ISBN: 978-93-90620-36-4/Year 2021
Size: 18 cm × 24 cm/Pages 392
Paperback/₹ 695.00

Neurobiology deals with the study of structure and functions of the nervous system. The brain is the most important organ of the nervous system, and it makes us human since it is the seat of our behaviour. Nerve cells (neurons) are the basic building blocks of the nervous system (or the brain) in the same way that elementary atomic particles and forces are the building blocks of physical matter.

Neural function depends on the coordinated action of neurons. Therefore, the basic principles and mechanisms of neurophysiological functions from molecular, genomic to cellular-organismal levels form the central theme of the book. Mathematics has been used when considered essential; emphasis is given to the development of qualitative intuitive understanding of complex functions. For understanding the nervous system or the brain it is essential to learn how single cell and molecules in the nervous system function to produce electrical activity. Neuroelectric phenomena have thus been duly emphasized in the text. Pathological, pathophysiological aspects of neurobiological phenomena have also been fairly focused on.

Contents:

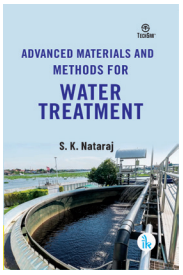
Organization of the Nervous Tissue into Nervous System/ Developmental Neurobiology/The Plasma Membrane and Excitability/The Action Potential/Synaptic Transmission/Sensory Systems: Cutaneous Sensation and Pain Sensation/Sensory System: Visual System/Sensory System: Auditory System/Sensory System: The Vestibular System/The Olfactory System: The Sense of Smell/ The Gustatory System: The Sense of Taste/Proprioception/Motor Systems/Biological Rhythms/Learning and Memory/Neural Control of Cardiovascular System/Central Nervous System: Neurodegenerative Disorders/Epilepsy and Seizures/Emotions/ Language and Speech/Neural Control of the Respiratory System/ Psychiatric Disorders/References/Index

Audience – B.Sc Zoology (Hons.)/M.Sc Zoology/Biochemistry/ Neuroscience.

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Advanced Materials and Methods for Water Treatment



S. K. Nataraj

ISBN: 978-81-959662-5-7/Year 2023
Size 16 cm × 24 cm/316
Paperback/₹ 595.00

Demand for safe and clean water is ever increasing and on the other hand, efforts to recover wasted resources particularly water are also gaining significant importance. Researchers, scientists, innovators, and policymakers throughout the world are investing their time and efforts to build effective and sustainable infrastructure to manage and recover resources from discarded wastes of various states and nature.

This book would serve as a guide to researchers, technologists, policymakers as well as students community on the various materials stock and methods developed in recent years to address complex pollutants that are difficult to treat or remove with conventional as well as existing water treatment methods.

This book will be a guide to the early career researchers, scholars and research & development teams both at academic and industrial levels.

Salient Features:

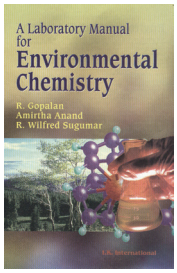
- Detailed description of chemical and biological materials and methods use for various types of wastewaters and ground water treatment.
- Useful reading for academic and industry.
- Includes various materials and methods used for the treatment contaminated groundwater, surface water and industrial wastewater.

Contents:

Introduction and Overview of Current Water Treatment Technologies/ Advances in Water Recycling and Resource Reclamation/Membrane Processes: Advances in Novel Membranes/Advances in Forward Osmosis: An Alternative Membrane Process/Advances in Functional Polymer Materials for Water Treatment Applications/Advances in Ultra-porous Filters for Water Treatment/Advances in Block Copolymer-based Membranes/Recent Advances in Nanotechnology-based Water Filtration/Index

Audience – Researchers, Scholars and Research & Development teams
Shelving – Environmental Science/Chemistry

A Laboratory Manual for Environmental Chemistry

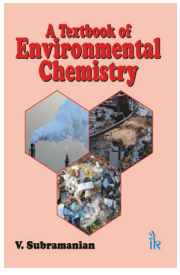


R. Gopalan • Amirtha Anand
R. Wilfred Sugumar

ISBN: 978-81-907462-5-0/Year 2009
Size 14 cm × 21.5 cm/Pages 204
Paperback/₹ 315.00

(See on page 117)

A Textbook of Environmental Chemistry



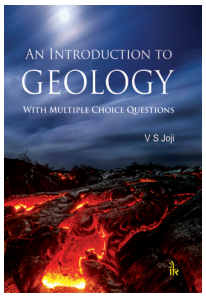
V. Subramanian

ISBN: 978-93-81141-19-9/Year 2011
Size 18 cm × 24 cm/Pages 498
Paperback/₹ 545.00

(See on page 118)

An Introduction to Geology

With Multiple Choice Questions



V. S. Joji

ISBN: 978-93-85909-20-7/Year 2017
Size 18 cm × 24 cm/Pages 415
Paperback/₹ 595.00

The book contains two sections-- descriptive and question bank sections. The descriptive part of the book contains concise and focused treatment of the different sub-disciplines of Geology. The information presented in this part of the book covers Physical Geology, Geomorphology, Structural Geology, Geotectonics, Stratigraphy, Indian Geology, Palaeontology, Geoinformatics, Crystallography, Physical Mineralogy, Chemical Mineralogy, Optical Mineralogy, Descriptive Mineralogy, Igneous Petrology, Sedimentology, Metamorphic Petrology, Geochemistry and Environmental Geology, Economic Geology, Exploration Geology, Engineering Geology and Hydrogeology.

The book is highly useful to faculty and students especially those who are preparing for various competitive examinations viz. UGC-CSIR, GATE, UPSC Geologists examination, Indian Civil Services, Forest Services, various state level officers' and other examinations including UG and PG level University exams.

Salient Features:

- Covers all the major topics in Geology, with an emphasis on the geology of India.
- Contains more than 1400 objective type questions with answers.
- Presents solved GATE papers of the last 6 years.

Contents:

Section I: Physical geology and Geomorphology/Structural Geology/ Geotectonics/Stratigraphy/Indian Geology/Palaeontology/ Geoinformatics

Section II: Crystallography/Physical Mineralogy/Chemical Mineralogy/Optical Mineralogy/Descriptive Mineralogy/Igneous Petrology/Sedimentology/Metamorphic Petrology/Geochemistry/ Environmental Geology

Section III: Economic Geology & Exploration Geology/Engineering Geology/Hydrogeology

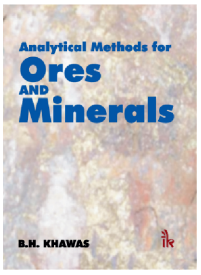
Section IV: Multiple Choice Questions

Section V: Solved Question papers of GATE Examinations (2011-2015)

Annexure

Audience – Students and faculties of Geology/Earth Sciences/ Geophysics and other related fields. Competitive examination aspirants of GATE, UGC-NET, UPSC Geologist's Exam and so on

Analytical Methods for Ores and Minerals



B.H. Khawas

ISBN: 978-81-89866-54-9/Year 2013
Size 18 cm × 24 cm/Pages 392
Hardback/₹ 1495.00

This book exclusively covers well tested analytical methods for their accuracy and versatility for ores and minerals of most of the elements.

The present book covers methods of analysis of most of the minerals right from alkali metals to zirconium. The methods given in the book are well tested and practices in laboratories engaged in analysis of ores and minerals. The book also covers topics on fundamental principles of analytical chemistry, computation of analytical data,

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info@ikinternational.com

error and precision in analytical results, etc. A chapter is dedicated to the management of analysis and safety in laboratory in order to give an idea to chemists that how to proceed for analytical work in a well planned and systematic way with all precautions to be taken for safety. The principles of management applied for laboratory organization will definitely help the laboratory managers in ensuring smooth and speedy work with quality.

The principle of analysis is discussed in the beginning of each method to understand the theoretical aspects and reactions involved in the course of analysis. This will help the reader to understand the theory of analysis and role of each reagent used. For determination of major radicals in the ore, conventional chemical methods of analysis are suggested whereas instrumental methods are suggested for elements present in minute quantity.

The book will be useful for students as well as analytical chemists engaged in the field of analysis of ores and minerals.

Contents:

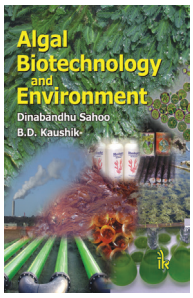
Ores, Minerals and Rocks – A Brief Introduction/General Principles of Analysis/Statistical Treatment of Analytical Data/Management of Laboratory and Safety/The Alkali Metals/Aluminium Ores/ Antimony Ores/Arsenic Ores/Barium Ores/Beryllium Ores/ Bismuth Ores/Boron Minerals/Cadmium Ores/Calcium and Magnesium Minerals/Chromium Ores/Cobalt Ores/Copper Ores/ Fluorine Minerals/Germanium Ores/Gold Bearing Ores/Iron Ores/ Lead Ores/Manganese Ores/Mercury Ores/Molybdenum Ores/ Nickel Ores/Phosphorous Minerals/Polymetallic Ores/Selenium and Tellurium Minerals/Silicon and Siliceous Materials/Silver Ores/ Sulphur Ores/Tin Ores/Titanium Ores/Tungsten Ores/Zinc Ores/ Zirconium Ores/Index

Audience – Students of Analytical Chemistry and Teachers & Professionals engaged in analysis of Ores and Minerals

Algal Biotechnology and Environment

Editors

Dinabandhu Sahoo
B.D. Kaushik



ISBN: 978-93-81141-71-7/Year 2012
Size 18 cm × 24 cm/Pages 346
Hardback/₹ 1595.00

(See on page 183)

Biodiversity

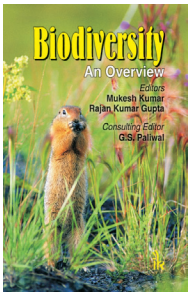
An Overview

Editors

Mukesh Kumar • Rajan Kumar Gupta

Consulting Editor

G.S. Paliwal



ISBN: 978-93-80578-88-0/Year 2011
Size 18 cm × 24 cm/Pages 478
Hardback/₹ 3995.00

India's phytodiversity is one of the most significant in the world. India is one of the twelve mega-biodiversity centers in the world and also an important center of origin of agrobiodiversity. It is therefore, very important to study, document and conserve the plant wealth of India and also of the world before its possible extinction. There are convincing scientific, economic and sociological reasons for giving priority to the conservation of the major centers of plant diversity throughout the world.

The strategies to conserve the biodiversity include establishment of protected area network and corridors with emphasis on appropriate levels of management, reduction of anthropogenic pressure on natural populations by cultivating them elsewhere, programmes of augmentation, reintroduction and introduction of target taxa, restoration of degraded habitats, etc. The conservation strategies can be either, in-situ conservation of genetic resources within their ecosystem and natural habitat or ex-situ conservation of components of genetic material of biological diversity outside their natural habitat. The choice of conservation strategy depends upon the nature of the material to be conserved, i.e., the life cycle and mode of reproduction, size of individual population and ecological status. Ex-situ techniques include the establishment of botanical and zoological gardens, banks of pollen, seed tissue culture, DNA, etc. Establishment of forest reserves, national parks, protected areas and on farm conservation of valuable plant varieties is being promoted to facilitate their in-situ conservation.

The present book comprises 29 contributions by eminent scientists and research workers who are acknowledged internationally in their respective fields. The book has been prepared with the intention of providing sufficient depth of the subject to satisfy the academic needs of the reader up to a higher level, which is comprehensive and interesting. There are articles on the various groups of plants, i.e., angiosperms, sedge vegetation, grassland vegetation, wetland flora, sacred groves, ethnobotany, pharmacognosy of drug-plants, phenology of medicinal plants, changing water regimes, hotspots and biodiversity conservation.

In totality, it contains useful information for the postgraduate students, teachers, scientists and researchers dealing with Basic and Applied Botany, Ethnobotany, Environmental Biology, Forestry and Agricultural Botany. Moreover, it will prove helpful for Government departments dealing with forestry, social forestry and the cultivation of medicinal plants.

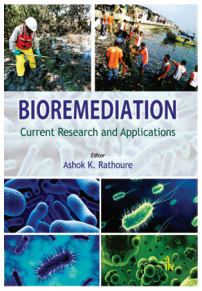
Contents:

Biodiversity and Conservation: Salient Features/Biodiversity Hotsports: A Tool for Biodiversity Conservation/Perceptions of Villagers on Climate Change and its Adverse Effect on Biodiversity Depletion and Agro-Ecosystem of Selected Villages of District Rewari, Haryana/Protect Groves: A Traditional Way of Conserving Biodiversity in Garhwal Himalaya, Uttarakhand/Phytodiversity: A Medicinal Aspect/Biodiversity Conservation and Ecotoursim-Opportunities and Issues in Uttarakhand/Distribution, Phylogeny and Phytovhemistry of Ephedra: A Traditional Medicinal Plant/ Quantitative Assessment and Ethnobotanical uses of Plants of Koti-Kanasar Forest Range (Jaunsar) Uttrakhand/Forest Plant Biodiversity in the State of Uttarakhand/Economics of Crop Diversification: Uttarakhand State/Medicinally Important Endangered Orchid Habenaria Intermedia D.Don and H.edgeworthii Lindl: A Phenological Study/Ichthyodiversity of River Ramganga of Water Uttar Pradesh/Mapping of Forest Plantations in Forest Research Institute, Dehradun Using Aerospace Remote Sensing/Biodiversity and Conservation of Mangroves in the State of Orissa with Special Reference to Bhitarkanika/Invasive Alien Plant Species: A Threat to Native Biodiversity/Pollen Diversity of Higher Vascular Plants Growing in and Around Firozabad District of Uttar Pradesh: A Taxonomic View/Response of Higher Plant Biodiversity to SO2, Exposure/Diversity of Jatropha in India/Medico-Religious Plant Diversity of Uttar Pradesh/Floristic Diversity of Sikkim Himalayas with Notes on Ethnoveterinary Applications/Coal-Fired Industries and the Anthropecology of Plants - A Review/Biodiversity of Sadges in Wetlands of Gyanpur/Phytodiversity Conservation in India/Ethnobotanical Flora of Dewghat Forest, Uttar Pradesh: Need for Conservation/Muga Silkworm Biodiversity: A Profile/ Medicinal Plants: Local Heritage with Global Importance/Indigenous Traditional Knowledge of Medicinal Plant Biodiversity amongst Tribals of Rajasthan/Conservation of Phytodiversity Through In-Vitro Strategies/An Appraisal of the Diversity of Arborescent Plants of Doon Valley NW Himalaya/Index

Audience – Postgraduate students, teachers, scientists and researchers dealing with Basic and Applied Botany, Ethnobotany, Environmental

Biology, Forestry and Agricultural Botany. Moreover, it will prove helpful for Government departments dealing with forestry, social forestry and the cultivation of medicinal plants.

Bioremediation Current Research and Applications

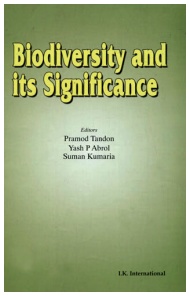


Ashok K. Rathoure

ISBN: 978-93-85909-60-3/Year 2017
Size 16 cm × 24 cm/Pages 476
Hardback/₹ 4095.00

(See on page 186)

Biodiversity and its Significance



Editors

Pramod Tandon • Yash P. Abrol
Suman Kumaria

ISBN: 978-81-88237-81-4/Year 2007
Size 18 cm × 25 cm/Pages 384
Hardback/₹ 1495.00

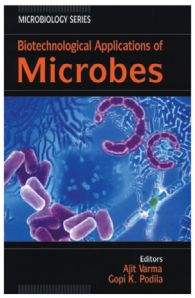
Biodiversity and its Significance deals with the various fundamental aspects of biodiversity, which have a direct and strong impact on human beings and their environment. It comprises 20 articles contributed by renowned experts in their areas.

Contents:

Nitrogen in Agricultural Ecosystem/Intellectual Property Rights and Community Rights/Sustainable Agriculture for Enduring Food Security in Northeastern States of India/Agrobiodiversity in North-East India/Crop Responses to the Elevated Carbon Dioxide/ Mathematical Modelling of Carbon Fluxes Using Remote Sensing Data/Sulphur in the Environment/Climate, Climate Variability and Climate Change for North-East India/Collection and Conservation of Rice Germplasm in India: Status and Future Strategies for North-East India/Inland Indigenous Ornamental Fish Germplasm of Northeastern India: Status and Future Strategies/Medicinal Plants and Conservation: Some Issues and Concerns/Bioinformatics in Biodiversity Management/Conservation of Splendid Orchids of North-East India/Diversity in Agri-Horticultural Plants—An Experience with North-East India/Microbial Diversity: A Review/ Biodiversity and Forest Cover Dynamics of Dry Deciduous Forests of Eastern Ghats (Andhra Pradesh)/Animal Biodiversity in Northeastern Hill Region with Specific Reference to Economic Livestock/ Conservation of Medicinal Plants Diversity of Meghalaya/Shifting Cultivation: Issues and Strategies in Northeastern Hill Region/Wild Edible Fruits and Seeds of North-East India/Index.

Audience – Students and Research Scholars in Plant Sciences, Agricultural Science and Bioinformatics.

Biotechnological Applications of Microbes



Editors

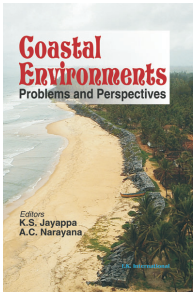
Ajit Varma • Gopi K. Podila

ISBN: 978-81-88237-31-9/Year 2005
Size 16 cm × 25 cm/Pages 364
Hardback/₹ 1995.00

(See on page 185)

Coastal Environments

Problems and Perspectives



Editors

K.S. Jayappa • A.C. Narayana

ISBN: 978-93-80026-28-2/Year 2009
Size 16 cm × 24 cm/Pages 296
Hardback/₹ 995.00

Coastal Environments display the impact of natural forces and processes on man and also the impact of man on the coastal environment. The exploitation of natural mineral resources, navigation and recreation activities are an integral part of the problems and perspectives of coastal environments.

This volume highlights various processes, particularly sediment transport, coastal erosion and its management, landform evolution and resources of the coastal region. The case studies are presented under each section. The availability of comprehensive basic scientific data is vital for effective coastal zone management.

There are sixteen papers together on coastal resources, coastal landforms, coastal erosion, sediment transport and dredging and all these add the scientific information for coastal zone management. The last section of the book comprises the papers on application of remote sensing in environmental studies and two assorted papers on surface run-off and flora of Gondwanaland. The causes for coastal erosion, the present scenario of erosion along Kerala and Karnataka coasts and the mitigation procedures have been explained in this book. The utility of seawalls and other protection structures in arresting coastal erosion has been discussed and debated in detail.

Contents:

Coastal Environments: Problems and Perspectives**/SECTION I – COASTAL RESOURCES:** Mineral Resources of Coastal Tracts of India/Coastal and Marine Fisheries Resources of Kerala – Conservation and Sustainable Development/Coastal Fishery Resources of India with Special Reference to Karnataka – Management Implications/ Bioresources of Coastal Sand Dunes – Are They Neglected ?/ **SECTION 2 – COASTAL LANDFORMS:**

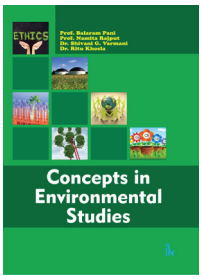
Evolution of coastal landforms Southern Karnataka: A Remote Sensing Approach/Long-term Morphological Changes of Shorelineand Estuaries along the Northern Kerala Coast: Remote Sensing andGIS Based Study/Coastal Landforms Changes in and Around Cochin and Their Implications in Coastal Zone Management/Delineation of Submerged Paleo-shorelines and Paleo-channels along the Southern Karnataka Coast using Remote Sensing/Preparation of Land Use/ Land Cover Map as an Input to Universal Soil Loss Equation through Remote Sensing and GIS/**SECTION 3–SEDIMENT TRANSPORT AND MAINTENANCE DREDGING:** Alongshore Sediment Transport and Maintenance Dredging Practices in Major Ports of India/ Effects of Hydro-meteorological Conditions on Sediment Transport: A case study in Hugli Estuary using Radiotracers/Application of Remote Sensing and Mike-21 for Sediment Dynamics off Mangalore Coast/**SECTION 4–COASTAL EROSION AND MANAGEMENT:** Coastal Erosion and Management/Breakwaters: An Innovative Hard Option for Coastal Erosion Mitigation Measures/Miramar (Goa) Beach Management Project: An Oceanographic Evolution/Failure Analysis of Seawalls along Karnataka Coast and Recent Trends in Coastal Protection/**SECTION 5–APPLICATION OF RS & GIS AND FLORA IN ENVIRONMENTAL GEOSCIENCES STUDIES:** Remote Sensing in Gelogical and Environmental Studies/Modelling Spatio-temporal Distributions of Surface Runoff in Undulating Terrain using Remote Sensing and GIS/Status of Coastal Gondwana: A Floristic Perspective/Index.

Audience – Postgraduate Students, B.E./B.Tech. & M.E./M.Tech. students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Concepts in Environmental Studies



Prof. Balaram Pani
Prof. Namita Rajput
Dr. Shivani G. Varmani
Dr. Ritu Khosla

ISBN: 978-93-90620-45-6/Year 2021
Size: 16 cm × 24 cm/Pages 194
Paperback/₹ 245.00

"Environmental Studies" book makes the people aware about the importance of environment, possible threats and the measures required for protecting it. It is in accordance with the syllabus laid down by U.G.C. for all undergraduate courses in different disciplines. The book is divided into eight Units out of which 7 have been written as per the syllabus and the last unit talks about recent advances in the environment conservation. The book will also help candidates preparing for various competitive exams since knowledge about environmental aspects is tested in many such examinations.

Salient Features:

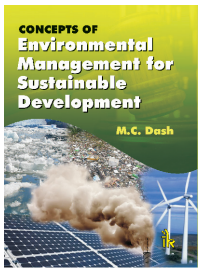
- The book describes concepts and features with the help of many illustrations, flow charts and tables.
- Efforts have been made to define the important terms used in the text.
- Updated data as recent as 2021 is presented in most of the cases.

Contents:

Environmental Studies: A Multidisciplinary Subject/Natural Resources/Ecosystems/Biodiversity/Environmental Pollution/Environment Protection: Policies & Practices/Human Population and Environment/Recent Advances in Environment Conservation/Index

Audience – B.Sc/M.Sc Physics/Chemistry/B. Tech

Concepts of Environmental Management for Sustainable Development



M.C. Dash

ISBN: 978-93-82332-27-5/Year 2013
Size 18 cm × 24 cm/Pages 244
Paperback/₹ 385.00

The present book is a pioneering work on environmental management for sustainable development. This up-to-date and comprehensive textbook integrates the concepts of environmental science with environmental management dealing with different management tools for achieving sustainable development. The text is suitable for environmental science and management, MBA and BBA students, both at undergraduate and postgraduate levels.

Broadly it covers:

- Concepts in ecology and environmental sciences.
- Concepts of sustainable development including indicators, priorities and practices.
- Concepts of environmental management including corporate environmental indicators, legal, technological and managerial tools.
- Detailed treatment of environmental laws, EIA and EMP, life cycle analysis, pollution control technology, EMS certification, environmental auditing, accounting, industrial safety practices, disaster management, corporate social responsibility, etc.
- Waste treatment, municipal, hazardous, biomedical wastes, secured landfill, Hazchem code, different hazards, risk assessment and analysis, etc.
- Case studies.
- Energy management and climate change.

Contents:

Background: Environment and Ecology/Concept of Sustainable Development/Environmental Management/Environmental Law/Waste Management/Energy Management – Global Climate Change/Index.

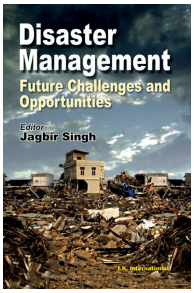
Audience – Environmental Science and Management.

Disaster Management

Future Challenges and Opportunities

Editor

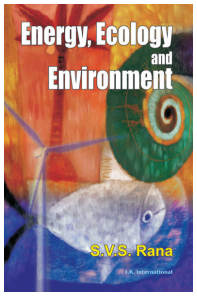
Jagbir Singh



ISBN: 978-81-89866-46-4/Year 2007
Size 18 cm × 24 cm/Pages 364
Paperback/₹ 525.00

(See on page 9)

Energy, Ecology and Environment



S.V.S. Rana

ISBN: 978-81-89866-94-5/Year 2008
Size 14 cm × 21.5 cm/Pages 172
Paperback/₹ 315.00

This book presents a comprehensive text for undergraduate students of engineering for their core course in Environmental Science and Engineering and for elective courses in Environmental Pollution, Environmental Health and Environmental Engineering. It introduces the reader to different areas of ecology, environmental science and engineering. Furthermore, the concept of social issues and the environment have also been discussed. It covers a wide range of topics such as energy, global environmental problems, solid waste management, air pollutants and their effects, water pollution and their effects, soil pollution and noise pollution.

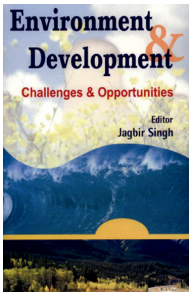
Contents:

Energy and Environment/Global Environmental Problems/Atmosphere and Air Pollution/Hydrosphere, Water Pollution and Waste Water Treatment/Lithosphere, Land and Soil Pollution/Noise Pollution/Index.

Audience – Environmental Studies and Environmental Science.

Environment and Development

Challenges and Opportunities



Editors

Jagbir Singh

ISBN: 978-81-88237-40-1/Year 2005
Size 16 cm × 24 cm/Pages 660
Paperback/₹ 745.00

In the last 100 years, mankind has managed to destroy much of what it took nature millions of years to create. At no point in history has so much damage been done to our natural heritage in such short a time. If anything ever needed to be done to stop this crime against our future generations then now is the time, as with every passing day we are speeding towards a self-inflicted doomsday. What is killing our ecology and environment is generally known. What we need are solutions and ways of implementing them. The book presents the most up-to-date ideas on solving problems, both ecological and environmental, which mankind has brought upon itself.

Contents:

Section 1: Natural Resource Management and Environment/**Section 2:** Environment, Economy and Regional Planning/**Section 3:** Role of Microbiology and Biotechnology in Environment/**Section 4:** Global Climate Change and Disaster Mitigation/**Section 5:** Environment, Health of Tourism Development/**Section 6:** Environment, Science and Technology/**Section 7:** Urban Environmental Stress.

Audience – Environmentalists, Microbiologists and Biotechnologists.

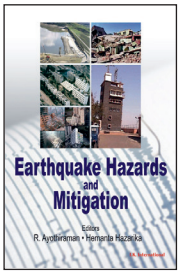
Earthquake Hazards and Mitigation

Editors

R. Ayothiraman • Hemanta Hazarika

ISBN: 978-81-89866-77-8/Year 2008
Size 28 cm × 22 cm/Pages 576
Hardback/₹ 2225.00

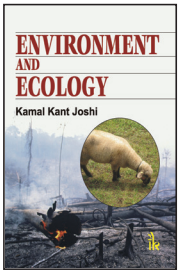
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Environment and Ecology

Kamal Kant Joshi

ISBN: 978-93-81141-42-7/Year 2011
Size 18 cm × 24 cm/Pages 192
Paperback/₹ 315.00



The environmental concern is an exigency and an important step for the conservation of natural resources and biodiversity for future. The relation between humans and animals also determines an ultimate role to serve the Mother Nature.

In this book basic concepts of environment and ecology have been introduced and analyzed in a simple manner as recommended for undergraduate classes in all disciplines by the UTU and UPTU.

This book, designed in seven chapters:

- highlights the components of the environment and its importance;
- introduces the natural resources, their conservation and case studies;
- specifies the types of ecosystems, ecological pyramids and ecological succession;
- discusses the status of biodiversity in India and the measurement techniques, value of biodiversity and conservation strategies;
- illustrates the environmental social problems like pollution and their prevention and control. Biogeochemical cycles are also included;
- designates the energy sources like renewable and non-renewable energy, minerals, etc.
- provides the environmental laws and policies.

At the end of each chapter are being included short/descriptive questions, and objective type questions. Also at the end of the book are appended model question papers and an exhaustive question bank.

Contents:

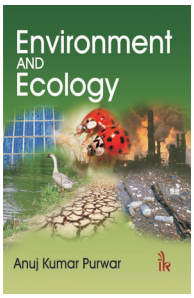
Environment and Ecology/Natural Resources/Ecosystem/Biodiversity/Environmental Pollution and Social Issues/Energy Resources/Environmental Laws/Index.

Audience – UG students of Environmental Studies.

Environment and Ecology

Anuj Kumar Purwar

ISBN: 978-93-81141-64-9/Year 2012
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 405.00



The advancement and improvement in the fields of technology and economy have not only improved the quality of human life but have also paved the way for global environmental degradation. In fact, the rapid depletion of natural resources and various environmental problems viz., deterioration of air quality, global warming and climate change, contamination of water and soil, groundwater depletion and disposal of solid, etc., are threatening the survival of life on earth.

Environment and Ecology is meant for courses in Environmental Sciences, particularly for engineering and technology students. Professionals concerned about the environment, environment ethics and environment literacy will also find this book highly useful.

Salient Features:

- Detailed explanations of the basic concepts.
- Modular approach to create environmental awareness.
- Provides basic understanding of the environment and its associated problems.
- Extensive use of graphs, flow charts, tables and block diagrams.
- Model examination papers.
- Question Bank.

Contents:

Introduction/Ecosystems/Human Activities and Environment/Natural Resources/Energy Resources/Environmental Pollution/Global Issues and Disaster Management/Social Issues and Environmental Acts/Environmental Management Plan/Model Papers/Index

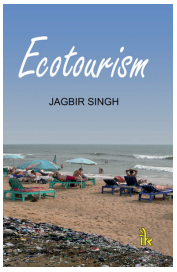
Audience – Environment Science, B.E., and B.Tech.

Ecotourism

Jagbir Singh

ISBN 978-93-80026-96-1/Year 2010
Size 16 cm × 24 cm/Pages 232
Hardback/₹ 595.00

(See on page 289)

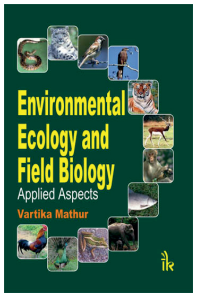


Environmental Ecology and Field Biology

Applied Aspects

Vartika Mathur

ISBN: 978-93-80578-22-4/Year 2011
Size 14 cm × 21.5 cm/Pages 242
Paperback/₹ 405.00



The book aims to create awareness about ecology, field biology and their applied aspects with special emphasis on biodiversity, pollution & environmental protection acts. It provides an in-depth information on some of the endangered animals with a note on their life cycle, habits and habitats and causes for their decline. The book also describes the life cycle of some common phyto- and zooplanktons and vertebrates and explains their ecological significance.

Salient Features:

- Biodiversity which includes genetic & species diversities, community and ecosystem diversities, importance of biodiversity, threats to biodiversity and conservation.
- Environmental pollution and environmental social issues.
- Environment Protection Acts.
- Study of endangered animals with special reference to reptiles, birds and mammals of Indian subcontinent and;
- Study of ecological significance of sentatives of phyto- and zooplanktons, fishes, amphibians, reptiles, birds and mammals.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Contents:

Biodiversity/Environment Protection Acts/Study of Enhangered Animals with special Reference to Reptiles, Birds and Mammals of Indian Subcontinent/Study of Ecological Significance of Representatives of Phytoplanktons, Zooplanktons, Fishes, Amphibians, Reptiles, Birds and Mammals/Index.

Audience – Environmental Ecology and Field Biology.

Environmental Impact Assessment



N.S. Raman • A.R. Gajbhiye
S.R. Khandeshwar

ISBN: 978-93-82332-93-0/Year 2014
Size 18 cm × 24 cm/Pages 232
Parperback/₹ 395.00

The present book provides an exposure of the Environmental Impact Assessment (EIA) principles and procedures. Its focus is on the methodology of the EIA so that it becomes a viable application oriented exercise. Major dimensions of environmental pollution like air quality, noise, water quality, soil and geology, aesthetics and socio-economic concerns are covered in this book. Measurement of environmental indicators and economists approaches of EIA are also described. The methodology highlighted in the book can also be applied to several other environmental issues.

The book is useful to advanced graduate students of engineering and sciences and post-graduate students of economics, management and of other disciplines who are part of project planning, implementation, operation and other related decision-making.

Contents:

General aspects of EIA/EIA in india/Base information approach/ Identification, prediction and assessment of impact/Decision-making and uncertainties/Monitoring/Case studies/Simulation/Annexure i: Form 1 (application for obtaining EIA clearance/Annexure ii: A compilation of legal instrument/Annexure iii: General standards for discharge of environmental pollutants/Annexure iv: Pre-feasibility report: points for possible coverage/Annexure v: Types of monitoring and network design considerations/Annexure vi: Guidance of assessment of baseline components and attributes/Glossary/Index

Audience – Students of Environmental Engineering and policy makers.

Emerging Trends in Biomedical Sciences and Health

Editors

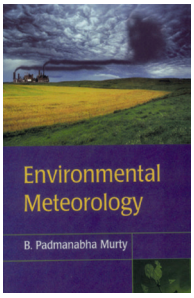
D.V. Rai • R.C. Sobti • Raj Bahadur



ISBN: 978-93-80026-22-0/Year 2009
Size 18 cm × 24 cm/Pages 272
Hardback/₹ 995.00

(See on page 190)

Environmental Meteorology



B. Padmanabha Murty

ISBN: 978-81-88237-10-4/Year 2004
Size 14 cm × 21.5 cm/Pages 304
Paperback/₹ 395.00

Applications of meteorological principles to environmental problems, though broadly known, are neither widely understood nor studied in detail. With increasing awareness of environmental status and for sustainable development without environmental degradation, much care is being taken, particularly in respect of atmospheric environment. Even though Environmental Meteorology forms part of the curriculum of M.Sc. (Environmental Science) in universities there is no comprehensive textbook available on the subject. This book, encompassing all the aspects of Environmental Meteorology, is being brought forth sensing that very lacuna. Besides being used as a textbook, it would also serve as a reference book to Environmental Experts as well as Scientists/Engineers in State and Central Pollution Control Boards, as also industries like Indian Oil Corporation, National Thermal Power Corporation and the likes.

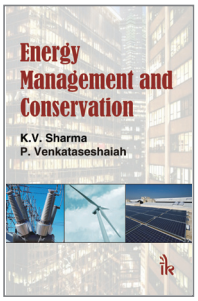
Contents:

Atmosphere, Its Nature and Importance/Ecology and Environment/ Meteorological Fundamentals/Atmospheric Diffusion/ Meteorological Instruments/Application of Meteorology to Air Pollution/Air Quality/Urban Impacts on Meteorological Parameters/ Urban Air Pollution Models/Environmental Indices/*Appendix I* : Some Statistical Principles Commonly Used in the Air Pollution/Data Analysis/*Appendix II*: Glossary of Terms/*Appendix III*: Conversion Factors and Useful Information/References/Subject Index/Author Index.

Audience – M.Sc (Environments Science), Scientists, Engineers in Pollution Control Boards and Industries like Oil, Thermal Power Corporations.

Energy Management and Conservation

K.V. Sharma • P. Venkataseshaiah



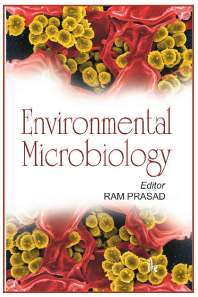
ISBN: 978-93-81141-29-8/Year 2011
Size 18 cm × 24 cm/Pages 168
Paperback/₹ 425.00

(See on page 92)

Environmental Microbiology

Editor

Ram Prasad



ISBN: 978-93-84588-52-6/Year 2016
Size 16 cm × 24 cm/Pages 338
Hardback/₹ 2995.00

Environmental Microbiology highlights the interrelatedness of microbes with life and the environment. It explores the beneficial impact that microbes have on agriculture and food processing, as well as the environment. Further, it goes on to discuss some of the negative impacts that microbes have on our world, such as their role in causing diseases.

This book incorporates the most recent advances in environmental microbiology. The overall objectives of the text are (a) to define the important microbes involved in environmental microbiology; (b) explore the nature of the different environments in which the microbes are situated; (c) the methodologies used to monitor the microbes and their activities and, (d) to evaluate the success achieved in the application of microbes in solving environmental problems through manipulation of their activities.

With its focus and coverage, this text is an essential reading for undergraduate, postgraduate and research students in environmental microbiology studies, and to serve as a reference resource for scientists, professionals and engineers interested in this field.

Contents:

Evolutionary History of Microbiology/Prospects of Vermicompost for Organic Cultivation in India/Role of Blue Green Algae in

Environment Management/Medicinal Plants for Microbial Control/ Microorganisms and Role in Sustainable Environment/Fluoride Tolerant Microorganisms and their Possible Role in Bioremediation/ PGPR Bio-inoculants for Sustainable Crop Production/Mass Production of Arbuscular Mycorrhiza/Physicochemical and Bacteriological Studies of Wetland Soils of Keoladeo National Park, Bharatpur, Rajasthan/Production of Bacterial Proteases Using Agro-industrial Wastes by Statistical Experimental Designs/ Adverse Effect of Indiscriminate use of Chemical Pesticides and its Alternative Eco-friendly Means for Management of Diseases and Pests Infecting Agricultural Crops/Arbuscular Mycorrhizal Fungi and its Interactions with Environment/Arbuscular Mycorrhiza as Bioprotectant: A Review of the Mechanisms Involved/Resistance: Origin, Evolution and Challenges in Future/Algae and Wastewater Remediation: Current and Future Scenario

Audience – UG and PG students of biology, environmental science, microbiology, biotechnology, ecology and environmental engineering. Researchers in these areas, scientists, engineers.

Environmental Biotechnology

Basic Concepts and Applications

Second Edition

Indu Shekhar Thakur

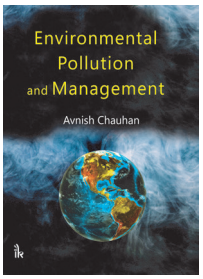


ISBN 978-93-80578-47-7/Year 2011
Size 18 cm × 24 cm/Pages 536
Paperback/₹ 525.00

(See on page 190)

Environmental Pollution and Management

Avnish Chauhan



ISBN: 978-93-86768-61-2/Year 2019
Size: 18 cm × 24 cm/Pages 228
Paperback/₹ 345.00

Environmental pollution is defined as the contamination of the physical and biological components of the earth/atmosphere to an extent that normal environmental processes are adversely affected. These effects can cause soil erosion, desertification, landslides, extinction of species, depletion of natural resources and waste accumulation.

Environmental pollution occurs in various forms, namely, air, water soil, radioactive, noise, heat/thermal and light.

This book is designed for B.Sc. (all branches), B.B.A., B.C.A., B.Tech, Polytechnic, B.A., B.Com, M.Sc., M.Tech, M.A., PhD entrances, NET, SLET examination and competition examinations of national/state level Civil Services. This book presents the fundamental concepts and principles of environment science and technology. The book has been divided into 14 chapters and each chapter has been designed such that student can grasp the related topic with ease. Presence of case studies makes the concepts more simple and understandable. Every chapter contains multiple-choice and review questions for selfassessment of students. Extensively illustrated, the book provides in-depth coverage of major areas such as air pollution, atmospheric science, water pollution, global warming, ozone layer depletion, acid rain, environmental laws, sustainable development, environmental management, noise pollution, land pollution, radiation, solid waste management, etc.

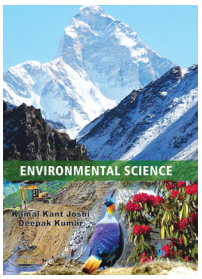
Contents:

Air Pollutants–Sources and Effects/Dispersion of Air Pollutants/ Air Quality Monitoring/Meteorological Factors/Effects of Air Pollution/Water Sampling and Parameters/Water Pollution/Global Atmospheric Problems and Control Measures/Environmental Legislation and International Efforts/Sustainable Development and Environmental Management/Land Pollution/Noise Pollution: Sources, Control and Effects/Radiation Pollution: Sources and Effects/Solid Waste Management/Index

Audience – All graduate programmes and M.Sc., M.Tech, M.A., PhD entrances, NET, SLET competition examination

Environmental Science

Kamal Kant Joshi
Deepak Kumar



ISBN: 978-93-86768-68-1/Year 2019
Size: 18 cm × 24 cm/Pages 278
Paperback/₹ 345.00

This book intends to impart the logical scientific knowledge about the concept of environment and its components. It is a comprehensive effort that comprises topics of Environment and Mathematics with a full-fledged syllabus as prescribed by the University Grants Commission especially for the undergraduate courses. The book comprises of 10 chapters starting with the introduction and importance of environmental science, then moving on to physics of natural resources, structure and functions of ecosystem, biodiversity and conservation, environmental pollution, environmental impact assessment, human population and environment, waste pollution and management, environmental laws, social issues, global warming and finally concluding with the natural disasters and their management.

The book provides in-depth information on types of natural resources and associated problems, biogeographical classification of India, sources and effects of different kinds of pollution, methodology of environmental impact assessment, environmental and human health, hazardous waste management and treatment technologies.

Salient Features:

- Highlights the components of the environment and its importance;
- Specifies the types of ecosystems, ecological pyramids and ecological succession;
- Discusses the status of biodiversity in India and the measurement techniques, value of biodiversity and conservation strategies;
- Illustrates the environmental social problems like pollution and their prevention and control;

At the end of each chapter there are exercise and objective-type questions. At the end of the book are appended MCQs and a mock test paper.

Contents:

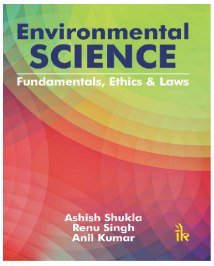
Environment and Ecology/Natural Resources/Ecosystem/ Biodiversity/Environmental Pollution and Social Issues/Remote Sensing/Environmental Laws/Environmental Impact Assessment (EIA)/Energy Resources/Natural Disasters/Objective Questions/ Mock Test for U.G. Students Environmental Studies/Glossary/ References/Index

Audience – UG students of Environmental Science

Environmental Science

Fundamentals, Ethics and Laws

Ashish Shukla
Renu Singh
Anil Kumar



ISBN 978-93-82332-84-8/Year 2014
Size 18 cm × 24 cm/Pages 344
Paperback/₹ 435.00

The present book provides consolidated information on each and every aspect of the environment. The book comprises 12 chapters opening with the introduction and importance of environmental

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

sciences, then physics of natural resources, structure and functions of ecosystem, biodiversity and conservation, environmental pollution, environmental impact assessment, human population and environment, waste pollution and management, environmental laws, social issues, global warming and concludes with the carbon credits.

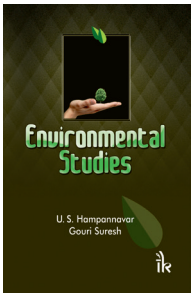
The book provides in-depth information on types of natural resources and associated problems, biogeographical classification of India, sources and effects of different kinds of pollution, methodology of environmental impact assessment, environmental and human health, hazardous waste management and treatment technologies.

Contents:

Introduction/Physics of Natural Resources/Structure and Functions of Ecosystem/Ecosystem Biodiversity and Conservation/Environmental Pollution/Environment Impact Assessment/Human Population and Environment/Waste Pollution and Management/Environment Laws/Unsustainable to Sustainable Development: Social Issues/ Global Warming and Carbon Sequestration/Financial Promotion for Sustainable Development: Carbon Credits/Appendix: The Batteries (Management and Handling) Rules, 2001/Index

Audience – B.Sc., BE and B.Tech students

Environmental Studies



Gouri Suresh
U.S. Hampannavar

ISBN: 978-93-80578-93-4/Year 2011
Size 16 cm × 24 cm/Pages 368
Paperback/₹ 385.00

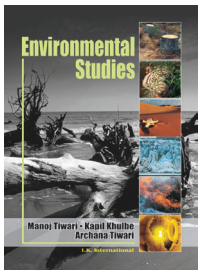
This book deals with the environmental issues in an integrated manner. Topics like Natural Resources, Ecosystems, Biodiversity and Pollution, relationships of Environmental Sciences with social issues and human populations have been discussed in detail as per the module syllabus formulated by UGC for Environmental Studies at the undergraduate level in all streams including various branches of Engineering as well as MBA. At the end of each chapter, a large number of questions of various types are given. The last chapter deals exclusively with fieldwork in which practical suggestions have been given for work in various situations. Answers to multiple choice questions are given in one of the five appendices.

Contents:

UNIT 1: Multidisciplinary Nature of Environmental Studies • UNIT 2: Natural Resources • UNIT 3: Ecosystems • UNIT 4: Biodiversity and its Conservation • UNIT 5: Environmental Pollution • UNIT 6: Social Issues and the Environment • UNIT 7: Human Population and the Environment • Unit 8: Field Work/Appendices

Audience – All Undergraduate streams of Engineering and MBA students.

Environmental Studies



Manoj Tiwari
Kapil Khulbe
Archana Tiwari

ISBN: 978-81-88237-82-1/Year 2007
Size 16 cm × 24 cm/Pages 290
Paperback/₹ 425.00

Environmental studies is a vast and rapidly growing subject with increasing relevance for sustainable development. It is the systematic study of environment, with our proper place and role in it. Realizing the importance of imparting environmental education, the Supreme Court directed that a basic course on environment be introduced as a compulsory subject at all levels of education.

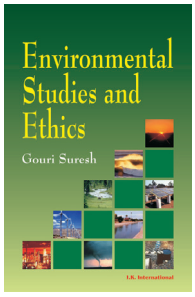
Environmental Studies deals with the various facets and dimensions of environment in an integrated, multidisciplinary and holistic manner. It provides an up-to-date, introductory view of essential topics in environmental studies to help students understand and retain the general principles. It is written with the understanding that even students without prior background in science should be able to use it, and so it has not been laid heavy with technical jargon. At the same time, it has enough depth to make it suitable as a textbook for students of different courses including humanities, commerce, science and engineering.

Contents:

The Multidisciplinary Nature of Environmental Studies/Natural Resources/The Ecosystems/Biodiversity and its Conservation/ Environmental Pollution/Social Issues and Environment/Human Population and the Environment/Glossary/Index.

Audience – All engineering branches, Environmental Science, Human Ecology, Environmental Studies or Natural Resources Management Courses.

Environmental Studies and Ethics



Gouri Suresh

ISBN: 978-81-89866-26-6/Year 2007
Size 14 cm × 21.5 cm/Pages 408
Paperback/₹ 445.00

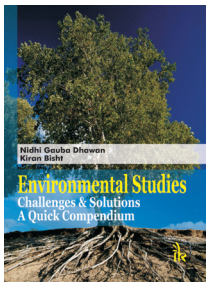
This book deals with the various dimensions of environment in an integrated, multidisciplinary and holistic manner. The book provides the latest introductory view of essential topics in environmental studies in a simple and easy to understand style. The presentation has been especially designed to enhance the students' recall index. The topics on rainwater harvesting and solid waste management have been covered in detail with relevant pictures and figures. Formulae to calculate rainwater harvesting potential and sizes of settling tanks have been given in Appendix-1. A large number of questions, ranging from multiple-choice to long essay type, have been given at the end of each unit. Answers to the multiple-choice questions have been given in Appendix-2. Information on websites and search engines, with examples, has been given in Appendix-3 to help students know how to surf the internet for information on any given topic. The last appendix gives tips to the students for improving memory, concentration and suggestions regarding how to score good marks in examinations etc.

Contents:

Definition, Scope and Importance/Man, Environment and Society/Social Issue and Environment/Human Population and the Environment/Environmental Pollution/Natural Resources/ Ecosystem/Biodiversity and its Conservation/Appendices/Index.

Audience – B.A., B.Com. and non-science undergraduate students.

Environmental Studies
Challenges & Solutions



Nidhi Gauba Dhawan
Kiran Bisht

ISBN: 978-93-82332-58-9/Year 2014
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 405.00

This book presents a comprehensive account of the concepts of Environmental Studies—compulsory course for all undergraduate streams.

During the past three decades, there has been an explosion of books on environmental problems. However, this book is different in a sense that it approaches the various environmental issues with an enigma in

mind. Written in question-answer format, it is easy for the student to directly address the subject area and understand it to the point. The main objective of the book is to improve the knowledge and concern towards preservation of our environment. This book will be ideal as a text for students, and will also be of interest to researchers and consultants in the environmental sciences. It will be equally beneficial to the candidates preparing for various competitive examinations. A large number of latest updates, examples and case studies are included.

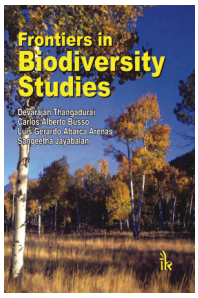
Multiple-choice questions at the end of each chapter will help the students to prepare for the examinations. A detailed Glossary has also been given at the end of the book.

Contents:

The Multidisciplinary Nature of Environmental Studies/Natural Resources/Ecosystems/Biodiversity and its Conservation/Environmental Pollution/Social Issues and the Environment/Human Population and the Environment/Field Work

Audience – Undergraduate students of all streams

Frontiers in Biodiversity Studies



Editors

Devarajan Thangadurai
Carlos Alberto Busso
Luis Gerardo Abarca Arenas
Sangeetha Jayabalan

ISBN: 978-93-81141-52-6/Year 2012
Size 18 cm × 24 cm/Pages 440
Hardback/₹ 1995.00

To use biodiversity components sustainably, to maintain ecosystem functions that provide goods and services, to conserve, protect and restore the natural world to halt biodiversity loss, it is vital to understand and conserve the diversity of life on earth through research, education and outreach. Several international initiatives such as BIOTA, ERA-Nets, CBD, DIVERSITAS, GBIF, GTI, MEA, GEOSS and GEO promote scientific research, conservation and sustainable development of available biodiversity components in the recent years, as the present form of globalization has heavily been criticized for ignoring sustainable development and environmental concerns. More recently, helping species and ecosystems to survive becomes practically more difficult.

The remarkable discovery of new species shows that there is still much to discover and makes conservation more important for the future generations. There has now been increasingly substantial and largely irreversible loss in the diversity of life on earth, currently threatened with extinction due to anthropogenic activities. Recently, IUCN notes that 1 bird out of 8, 1 mammal out of 4, 1 amphibian out of 3, and 6 marine turtles out of 7, are all threatened with extinction. One of the most comprehensive and recent study estimates that over a million species often within the borders of a single country will be lost in the next five decades. And so, assessing the causes and consequences of loss of biodiversity and the importance of conservation and sustainable use of biodiversity are the major challenges essential for our very survival on the earth.

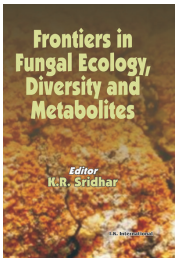
Frontiers in Biodiversity Studies has wide range of such topics including the biodiversity of aquatic mollusks, freshwater ciliates, wild legumes, dipterans, coastal and freshwater fishes, mangroves, phytopathogenic fungi, terrestrial heteropterans and insect communities, habitat loss, fragmentation, land use-land cover change, ecological agriculture, ecosystem services and their value to society. The updated reviews serve as capital in supporting food security, agricultural productivity and environmental management for the ever increasing global population in the 21st century.

Contents:

Species diversity of aquatic molluscs in mountain lakes of the Eastern Alps in Austria: An exemplary study/The chasmogamous/cleistogamous mixed breeding system, a widespread and evolutionarily successful reproductive strategy in angiosperms/Ecological agriculture: Strategy for sustainable development/Freshwater Ciliates (Protozoa, Ciliophora) from Argentina: An annotated and updated compilation/Towards the integration of culture collections/Higher-taxa as surrogates for species richness in terrestrial heteropterans of South American grasslands/Improvement in conservation value of insect communities in South Patagonian forests managed with variable retention/Legume diversity in the extra Andean Patagonia/Physiological and morphological traits of *Trichloris crinita* in the semi-arid zones of Argentina/Physiological traits on *Osmorhiza depauperata*, a biodiversity component in the *Nothofagus* forests of Southern Patagonia/Dipteran diversity in cattle pastures and rangelands of Washington State, USA/Distribution and biogeographical notes of coastal fish fauna of Veracruz, Mexico/Seasonal analysis of the ichthyofauna at three subsystems of the Alvarado lagoon, Veracruz, Mexico/Habitat loss and fragmentation in landscapes of the ramsar site, Alvarado lagoon system/The mangrove forests of Mexico: Transformation, conservation and threats/Trends of land use-land cover change in a complex tropical wetlands landscape: The case of the Chetumal, Mexico and Corozal Bay, Belize/An annotated checklist of *Crotalaria* L. (Fabaceae) in India/Fish distributional patterns in Greek rivers/The diversity and distribution of *Pleospora* (Pleosporaceae) in Maharashtra, India/Diversity of phytopathogenic conidial fungi of protected nature territories in Ukraine: Study toward elaboration of conservation strategy/Subject Index

Audience – Natural Scientists, Environmentalists, Conservationists, Taxonomists, Biodiversity Professionals, Policy Makers, Stakeholders and anyone working on Biodiversity Research and Applications.

Frontiers in Fungal Ecology, Diversity and Metabolites



Editor

K.R. Sridhar

ISBN: 978-81-89866-91-4/Year 2009
Size 16 cm × 24 cm/Pages 352
Hardback/₹ 1195.00

Mycology is a frontier area of research in life sciences. Fungi represent one of the three major evolutionary segments along with plants and animals. Fungal multidimensional features with basic and applied value projected their potential beyond routine systematics, diversity and environmental studies. In view of tremendous developments in the field of Mycology, the present treatise emphasizes various aspects of contemporary issues in mycology. It comprises 22 chapters with emphasis on the fungal ecology, diversity and metabolites. The topics treated include aquatic ecology, diversity and phylogeny, mutualism and interactions, potential metabolites, pathology and toxins, fungal Infections and prevention, cell permeabilization and advances in monocarboxylate transporters in yeasts with an emphasis on cancer therapy. This volume is of special interest to mycologists as a valuable source of information on the frontier areas of mycology dealing with diversity, ecological amplitudes, methods of assessment, novel metabolites and bioprospecting avenues.

Contents:

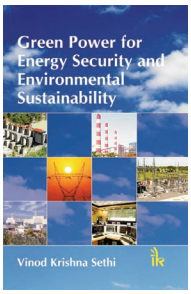
Freshwater Hyphomycetes/Diversity of Aquatic Hyphomycetes of the Western Ghat Rivers/Mangrove Fungi of the Indian Peninsula/Marine Fungi and Novel Metabolites/Trichomycetes/Forest Pathology in India/Diversity and Adaptive Response of Lichens in Antarctica/Diversity of Arbuscular Mycorrhizal Fungi of Endemic Myristicaceae/Arbuscular Mycorrhizal Fungi of the 'Khazan Land' Agro-Ecosystem/Arbuscular Mycorrhizal Fungi and Salinity Stress in Crop Plants/Production of Indole Acetic Acid by Ectomycorrhizal Fungi/Endophytic Fungi : Mutualism, Bioactive Metabolites and Bioprospecting/Identity and Toxigenic Potentiality of *Fusarium* spp. Colonizing *Sorghum*/Fumonisins – A New Class of Fusarial Mycotoxins/Improvement of Coffee Quality through Prevention of Moulds/Fungal Infections in Humans/Plasma Membrane Transport

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

of Monocarboxylates in Yeasts/Cell Permeabilization–An Approach to Increase the Biocatalysis in Yeasts/Molecular Approaches in Mycology Based on Polymerase Chain Reaction/Phylogenetic Tools for the Identification of Fungi/Bioactive Peptaibol Antibiotics from *Trichoderma*/Emerging Issues in Mycology/Index.

Audience – Postgraduate and Research students, Scientists and Engineers: Biological, Plant, Soil and Environmental Sciences, Microbiology, Bioengineering, Bioinformatics and Biotechnology.

Green Power for Energy Security and Environmental Sustainability



Vinod Krishna Sethi

ISBN: 978-93-34588-06-9/Year 2014
Size 16 cm × 24 cm/Pages 126
Hardback/₹ 695.00

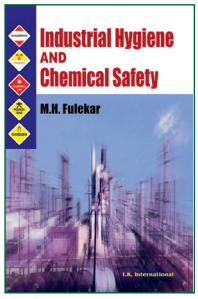
This book is for practising power engineers and postgraduate students and researchers in Green Energy Technology and has been produced as a blend of theory and practice on the subject. The book covers various dimensions of sustainable power development through Green Power Technologies as a key to energy security and environmental sustainability for Indian power sector. Strategies for 12th Five-Year Plan and Vision for 13th Plan and beyond has been put forward for providing a wider horizon to the researchers for understanding national perspective. This book basically deals with the transition of conventional power to the Green mega power – an inevitable change for combating the climate change. An important aspect of next generation Green Technology option, the carbon capture and sequestration (CCS) has been discussed with Indian perspective. Low carbon technology vision for India together with strategies, challenges and opportunities in Green Power for energy security, environmental sustainability may provide the readers an opportunity for course- correction in their line of thinking in Green Energy technology.

Contents:

Executive Summary: Energy Security and Environmental Sustainability/Sustainable Power Development Through Clean Coal Technologies/Major Issues, Strategies for 'Energy and Power' for 12th Five-Year Plan and Vision for 13th Plan and Beyond/Carbon Capture and Sequestration: A Front-line Technique for Combating Climate Change/Large Scale CO_2 Capture and Sequestration Plant and Supercritical and IGCC Demonstration Plants: A Feasibility Study on Next Gen Technologies in Green Power/Concluding Remarks on Efforts in Energy Sector for Environmental Sustainability and Application Aspects of CCS/Low Carbon Technology Vision for India/Strategies, Challenges and Opportunities: Green Power for Energy Security Environmental Sustainability/Appendix I: Renewable Energy (RE) Sector-specific Implementation Plan as per MNRE/Appendix II: Recommendations for the Generation Sector/ Index.

Audience – Practising Engineers, Environmentalist and P.G. students of related area.

Industrial Hygiene and Chemical Safety



M.H. Fulekar

ISBN: 978-81-88237-92-0/Year 2006
Size 16 cm × 24 cm/Pages 264
Paperback/₹ 265.00

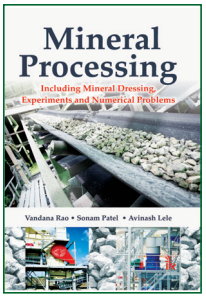
Chemical industry is the fastest growing industry in the country, with its present share of about 40% in the national gross industrial output. However, industrial activities involving hazardous chemicals have the potential to cause occupational diseases, injuries, and in serious cases even death, besides pollution to the environment, if effective safety measures in the use of chemicals at workplace are not observed. This makes the study of Industrial Hygiene, Health and Chemical Safety aspects of the industrial processes and operations at the workplace very important for industrial personnel, academicians and researchers. Keeping this in view, the paper 'Industrial Hygiene, Occupational Health and Safety' has been included in the syllabus of M.Sc. Environmental Sciences. Besides, Diploma in Industrial Safety is compulsory for Safety Officers in the industry. Chemical industries too require guidelines in the form of a book on Industrial Hygiene and Chemical Safety. The present book has been designed to meet the requirements of the above-mentioned courses and the industry.

Contents:

Concept of Industrial Hygiene and Safety/Safety and Health Provisions in Factories (Amendment) Act/Industrial Processes and Operations/Health Hazards/Monitoring in Workplace/Biological Monitoring/Control Measures/Personal Protective Equipment/ Safety Measures in Storage/Safety in Transportation of Chemicals / Fire And Explosion Hazards/Dow Index and Toxicity Index/ Hazard and Operability Studies/On-site and Off-site Emergency Planning/ Safety Audit.

Audience – M.Sc. Environmental Science, safety personnel in chemical industries.

Mineral Processing (including mineral dressing, experiments and numerical problems)



Dr. Vandana Rao
Miss. Sonam Patel
Prof. Avinash Lele

ISBN: 978-93-85909-50-4/Year 2017
Size 16 cm × 24 cm/Pages 400
Paperback/₹ 505.00

This book deals with the methodologies used in processing/separation of minerals from their ores, including pre-processing, dressing and separation techniques. Diverse types and grades of ore require diverse machinery, tools and techniques: the book amply addresses this need for variety of treatment. Besides these, background reading on occurrence of ores, mineralogy, properties of minerals and ores; all the important aspects of machinery used in practice; experimental methods; and numerical calculations involving extractive metallurgy have been given at appropriate depth.

Salient Features:

- Integrated coverage of theory, practical methods, and derivation of formulae and numerical problem solving.
- Dedicated section on machinery used in mineral processing including numerical calculations, construction and principles of working.
- In-depth treatment of processes including crushing, grinding, sizing, flotation, etc.
- Step-by-step treatment of processes and ample exercises for practice and experiments for lab courses.
- Reference to ASTM and other industry standards, as applicable.

With its coverage and emphasis, the book will be useful for graduate and diploma engineering students. Post-graduate students, engineers and researchers can brush up their knowledge, at a glance, about mineral- processing and dressing.

Contents:

PART I MINERAL PROCESSING
Chapter 1: Introduction
Chapter 2: Characteristics/properties of minerals for processing
Chapter 3: Comminution

Chapter 4: Crushing
Chapter 5: Grinding
Chapter 6: Sizing
Chapter 7: Classification & the movement of solids in fluids
Chapter 8: Gravity-concentration / separation
Chapter 9: Flotation
Chapter 10: Magnetic separation processes
Chapter 11: Separation of solids from fluids
Chapter 12: Typical flow sheets of mineral processing
Chapter 13: Pre treatment of ore/mineral/concentrate
Chapter 14: Chemical method of beneficiation
Chapter 15: Application of computer in mineral processing/dressing

PART II EXPERIMENTS & NUMERICALS IN MINERAL PROCESSING

A. Experiments in mineral processing
B. Numerical
Appendix I Metallic ore minerals
Appendix II Selected physical properties of metals
Appendix III Minerals used in large amounts
Appendix IV Hardness of minerals-Mohs' scale
Bibliography
Subject Index

Audience – Undergraduate students of Metallurgical, Material and Mining Engineering, Postgraduate Students, Engineers and Researchers.

Mycotechnology

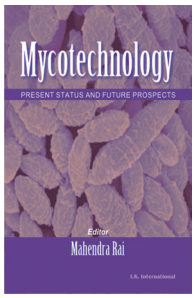
Present Status and Future Prospects

Editor

Mahendra Rai

ISBN: 978-81-89866-08-2/Year 2007
Size 18 cm × 25 cm/Pages 318
Hardback/₹ 1995.00

(See on page 208)



Microbes

Health and Environment

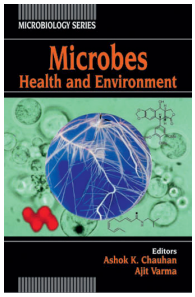
Volume III

Editors

Ashok K. Chauhan
Ajit Varma

ISBN: 978-81-88237-51-7/Year 2006
Size 16 cm × 25 cm/Pages 448
Hardback/₹ 1995.00

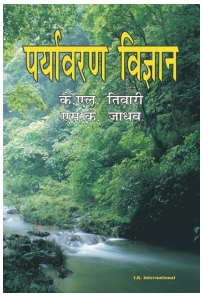
(See on page 169)



पर्यावरण विज्ञान

के. एल. तिवारी
एस. के. जाधव

ISBN: 978-81-907770-3-2/Year 2009
Size 16 cm × 24 cm/Pages 560
Paperback/₹ 625.00



प्रस्तुत पुस्तक पर्यावरण शिक्षा के साथ–साथ सामाजिक जनचेतना जाग्रत् करने के उद्देश्य से तैयार की गई है। पर्यावरण संकट का निदान आज हमारी पहली प्राथमिकता बन गया है। पुस्तक विश्वविद्यालय अनुदान आयोग के निर्धारित पाठ्यक्रम के आधार पर लिखी गई है।

पाँच अध्यायों में बनी पुस्तक में पर्यावरण, पारिस्थितिकी तंत्र एवं पारिस्थितिक, जैव–विविधता एवं इसका संरक्षण, पर्यावरण प्रदूशण तथा संसाधनों के उपयोग का विस्तृत वर्णन किया गया है। अनेक छायाचित्रों, आरेखीय चित्रों तथा सारणियों के माध्यम से विषय–सामग्री को सरल एवं पठनीय बनाया गया है। पुस्तक न सिर्फ छात्रों, बल्कि पर्यावरण प्रेमियों के लिए भी उपयोगी एवं ज्ञानवर्द्धक सिद्ध होगी।

विषय सूची:

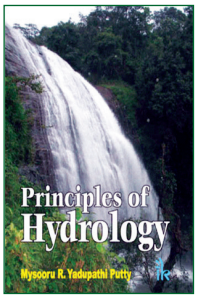
पर्यावरण/पारिस्थितिक तंत्र एवं पारिस्थितिकी/जैव-विविधता एवं इसका संरक्षण/ पर्यावरण प्रदूषण/अपोषणीय से पोषणीय विकास तक या संसाधन रहित से संसाधन सहित विकास तक/अनुक्रमणिका।

Principles of Hydrology

Mysooru R. Yadupathi Putty

ISBN: 978-93-80578-53-8/Year 2010
Size 16 cm × 24 cm/Pages 440
Paperback/₹ 425.00

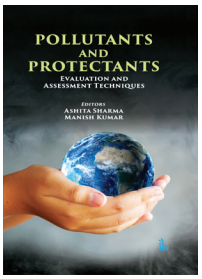
(See on page 17)



Pollutants and Protectants Evaluation and Assessment Techniques

Ashita Sharma • Manish Kumar

ISBN: 978-93-86768-76-6/Year 2019
Size: 16 × 24 cm/Pages 254
Hardback/₹ 995.00



Advances in technological developments have led to increase in buildup of pollutants in the environment. Increase in concentration of pollutants due to ill planned anthropogenic activities has created a situation of a serious concern for human race. The present book addresses the issues related to increase in concentration of pollutants in the biosphere, protocols to assess the toxicity of pollutants and how it can affect human race. It also summarizes some protective agents present in the form of natural products which can protect us from the harmful effects of these pollutants. The first chapter of the book focuses on carcinogenicity of environmental pollutants. Next four chapters focus on specific emerging pollutants which have increased in concentration due to anthropogenic activities. These are followed by a couple of chapters on the analytical aspects and various techniques and bioassays that can be used to estimate the toxic effects of these pollutants. In the last three chapters of book authors have tried to compile information available regarding the phytochemicals which can have protective effects against the carcinogenic nature of pollutants.

Contents:

Environmental Pollutants as Carcinogens and Cancer Risk in Humans/ Heavy Metals and Soil Contamination: Sources, Bioavailability and Effects on Crop Plants/Phthalates (Emerging Environmental Pollutants): Sources, Fate and Their Toxicological Consequences in Animals/Dioxins and Dioxin-like Compounds (DLCs)/Fluoride Toxicity and Its Potential Health Risks/Role of Bioassays in Evaluation of Biochemical and DNA Damaging Effects of Synthetic Food Dyes/ Recent Advances in Analytical Methods for Detection of Pesticides/

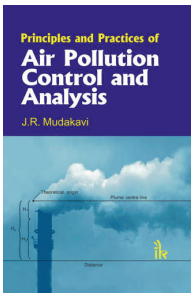
The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Phytochemicals from Medicinal Plants as Potential Antimutagenic/ Antigenotoxic Agents/Bioprospecting Endophytic Actinobacteria of Medicinal Plants as Potential Anticancer Therapeutic Agents/ Unravelling the Role of Chemopreventive Agents as Modulators of Carcinogenesis/Index

Audience – M.Sc students & researchers.

Principles and Practices of Air Pollution Control and Analysis



J.R. Mudakavi

ISBN: 978-93-80026-38-1/Year 2010
Size 16 cm × 24 cm/Pages 737
Hardback/₹ 1195.00
ISBN: 978-93-81141-83-0/
Paperback ₹ 525.00

Principles and Practices of Air Pollution Control and Analysis has been presented as a textbook as well as a ready reference book for scientists and technologists. The subject matter has been presented in five sections and 25 chapters. First section introduces the student to air pollution and the second section deals with the current air pollution control technologies. The third section is informative in character and presents environmental issues related to air pollution such as acid rain, global climatic change, CFCs and ozone layer etc. The fourth section presents management aspects of air pollution and the final section has been dedicated to instrumentation and chemical has been structured to other clear understanding of the subject matter with illustrated examples. The book has been written in accordance with AICTE syllabus for Environmental Engineering and provides comprehensive treatment of the subject matter.

The book provides an essential reading for undergraduate and postgraduate students of Environmental Science and Engineering and provides an insight into the chemistry of air pollution. It will also be of interest for professionals and consultants working in the area of air pollution control.

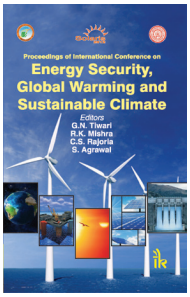
Contents:

Air pollution: a global phenomenon/gaseous pollutants/Physico-Chemical aspects of pollutants/Metrological aspects of air pollution/ Plume dispersion/Sampling/Particulatecontroll Absorption, adsorption and combustion of pollutants/$S0_2$ controll NO_x control/Organic emission control/Indoor air pollution/Automobile pollution control/ Global climate change/CFCS and Ozone layer/Acid rain/oise pollution/Health effects of pollutants/Air pollution in India! Air quality/Air pollution Indies/Principles of chemical analysis/and Recommended methods/Appendices/Index.

Audience – Environmental Science and Engineering.

Proceedings of International Conference on

Energy Security, Global Warming and Sustainable Climate



Editors

G.N. Tiwari • R.K. Mishra
C.S. Rajoria • S. Agrawal

ISBN: 978-93-82332-03-9/Year 2013
Size 16 cm × 24 cm/Pages 760
Paperback/₹ 2495.00

The focus areas of SOLARIS 2012 conference were Solar radiation modeling and day lighting, Solar thermal (ST), Photovoltaic (PV), Renewable energy resources (RES), Climate change (CC), Food processing industries/rural development (FRD), Life cycle cost analysis of renewable energy sources (LC). We received over 130 abstracts and 90 full research papers from scientists from leading teaching and research institutes across the world. The best 15 papers selected by guest of honors will be published in Journal of Fundamentals of Renewable Energy Applications (www.Ashdin.com/journals/jfrea)

The SOLARIS 2012 proceedings would be of great help to students, teachers, researchers, scientists, engineering and users involved in the area of renewable energy in general and solar energy in particular and other related research areas. The manufacturers and industrialists would also find this proceedings to be useful and beneficial in the context of renewable energy, solar energy and its applications.

Contents:

Wastewater Analysis of Sonepat Region (CC-1)/Thermal Performance and Design Guidelines of a Commercial Building Under Hot and Dry Climates of India (CC-3)/Evaluating Impact of Ethanol Fuelled Engine on CO_2 Emissions and Exergy Destruction Assessment of Wet Ethanol Operated HCCI Engine (CC-4)/CO_2 Mitigation by the Use of Hydrogen Operated HCCI Engine Vehicles and Earned Carbon Credit (CC-5)/Technological Potential for Reduction of Co_2 Emissions in Domestic Sector of a Typical Indian Village (LCS-1)/Life Cycle Cost Analysis and Earned Carbon Credit of Photovoltaic Thermal (PV-T) Air Collectors Connected in Series (LCS-3)/Life Cycle Analysis of Greenhouse Integrated PV System (LCS-4)/Life Cycle Cost Analysis and Active Solar Stills (LCS-6)/Environmental Assessment of Photovoltaic/Water-heating Solar Collectors for Applications in Hong Kong (LCS-7)/Learning for India from Solar Driven Vapour Absorption Cooling (LiBr-H2O) Systems for Com- mercial Office Buildings being used Worldwide – A Study (OTH-1)/Review on Phase Change Materials for Thermal Applications (OTH-3)/ Biomedical Waste Generation and Management Practices: A Case Study of Government Hospital, Soepat (OTH-4)/Modeling the Drying Kinetics of Paddy in an Integrated Paddy Dryer (OTH-6)/Impact of Industrialization on Groundwater Pollution in India (OTH-8)/ Application of Combined Process of Biofiltration and Ozonation for Treatment of Municipal Sewage in the Subtropical Cities (OTH-13)/ Analytical and Numerical Models for Determining Geothermal Energy Potential: A Case Study in India (OTH-15)/Advantages in Propaedeutic Cycles University Technological and Engineering Programs for the Development in Formative Research Solar Projects (OTH-17)/Growth of Rohu (Labeo rohita) in Bamboo Framed Passive Greenhouse Pond in Winter Season (OTH-21)/Global Scenario of Area, Production, Productivity and Marketing of Ginger (Zingiber officinale): Future Production Potential of Organic Ginger, its Processing and Marketing Strategies in North-Eastern Hill Region of India (OTH-23)/2011-2020, The Solar Decade (OTH-25)/Effect of Thermal Efficiency, Mileage and Cylinder Volume on the Ecological Efficiency of Light Petrol Vehicles (OTH-26)/Energy Requirements in Manufacture of Khoa – A Heat Desiccated Milk Product (OTH-27)/ Exergy Analysis of Waste Heat Based Combined Rankine Ejector-Absorption Refrigeration System (OTH-28)/Analyzing Thermal Insulation Effect of new Transparent Thin Films (OTH-30)/4-E (Energy-Exergy-Environment-Economic) Analysis of Stand-alone Solar Thermal Power Plants and Solar-Coal Hybrid Power Plants (PV-1)/Experimental Study of the Performance of Two Different Types of Photovoltaic Thermal (PVT) Modules under Singapore Climatic Conditions (PV-2)/Energy Efficient Solar Street Lightning System for Rural Areas (PV-3)/A Comparative Study for a Building Integrated Semitransparent Photovoltaic Thermal (BISPVT) System Integrated to Roof With and Without Duct (PV-4)/Mathematical Model for Computing Maximum Power Output of a PV Solar Module and Experimental Validation (PV-5)/Thermal Modelling of Hybrid PVT Water Heating System using Glass to Glass PV Module (PV-6)/TiO2 Coated Pebbles for Solar Photocatalytic Treatment of Dyebath Wastewater (PV-7)/Techno-Economic Analysis of Stand-alone Solar Fed AC Vs DC System (PV-12)/Analysis of Different Type of Hybrid Photovoltaic Thermal Air Collectors: A Comparative Study (PV-13)/

Photovoltaic Thermal (PV-T) Systems: Overview, Recent Achievements and Challenges (PV-15)/Effect of Panel Size on Solar Photovoltaic Refrigeration System (PV-16)/Full-scale Experimentation of a Roof and Façade BIPV Component in Naturally Ventilated Double-skin Configuration (PV-17)/A Review on Hybrid Photovoltaic Thermal (PVT) Solar Systems (PV-18)/Performance Evaluation of Hybrid Photovoltaic-Thermal (PVT) Greenhouse Dryer: An Experimental Study (PV-19)/"Risks of Solar PV Manufacturers and Developers in India" (PV-21)/Study of Hybrid Photovoltaic Thermal (HPVT) Solar Water Heater at Constant Collection Temperature for Indian Climatic Conditions (PV-22)/Field Experience of 1.2 kWp PV Array System in New Delhi: Performance Indices Evaluation (PV-24)/A Case Study to Fulfil the Requirement of Low Income Group (LIG) House by Installing PV Panel (PV-25)/A Photovoltaic Maximum Power Point Tracker: An ANN Approach (PV-28)/Full-scale Experimentation of Building Integrated Photovoltaic Component for Naturally Ventilated Double-skin Configuration (PV-29)/Life Cycle GHG Emissions of 200 kWp Grid Connected Solar Photovoltaic System in India (PV-31)/Comparison of Performance Analysis of a Hybrid Photovoltaic Thermal Double and Single Pass Air Collector Using Artificial Neural Network (PV-32)/Performance Evaluation of Conventional Hybrid Photovoltaic Thermal (PVT) Mixed Mode Dryer (PV-33)/Performance Evaluation of Building Integrated Glass to Glass Photovoltaic Module Fitted Greenhouse Dryer (PV-34)/Development and Testing of Hybrid Photovoltaic-Thermal (PVT) Integrated Solar Dryer: Techno-economic Analysis (PV-36)/Thermal Modelling and Experimental Validation of Hybrid Photovoltaic Thermal (HPVT)-Biogas Plants (PV-39)/Optimal Battery Sizing for a given Rated Power of Stand-alone PV System for Different Mode of Operation (PV-40)/Conductivity and Photoluminescent Studies of Some PPVs (Conducting Polymers) for its Use in Organic Solar Cells (PV-41)/Carbon Credits Earned by Hybrid Photovoltaic Thermal Array (PV-42)/Evaluation and Utilization of Kitchen Waste under Anaerobic Digestion for Biogas Production (RES-2)/Sustainability of Utilizing Bullock Power through Mechanical Gear System for Various Agricultural Post Harvest Operations in Reducing Non-renewable Energy Requirements (RES-3)/Performance Evaluation of EAHE, Skylight and SAPV Integrated IIT Mudhouse (RES-5)/Evaluation of Carbon Credit Earned by Different Designs of Solar Stills (RES-8)/Characterization of Water Quality of the National River Ganga at Varanasi, India (RES-11)/Influence of Water Temperature and Dissolved Oxygen to the Growth of Catla (Catla catla) and Rohu (Labeo rohita) in Greenhouse (RES-13)/Energy Balance for Bituminous Road for Harnessing Renewable Energy Source (RES-14)/RET Diffusion Model for Techno-Economics Feasibility (RES-15)/Drying Behavior of Chilli under Open Sun and Greenhouse Conditions (ST-2)/Sustainable Use of Producer Gas for a Diesel Engine on Dual Fuel Mode of Diesel-cum-Producer Gas in Performing Various Agricultural Operations by Engine Run Machines (ST-3)/Thermal Modeling and Performance Evaluation of an Earth to Air Heat Exchanger Integrated with a Greenhouse (ST-4)/Theoretical Parametric Study of Evacuated Tubes Integrated Single Slope Solar Still (ST-7)/Solar Drying Technology: Potentials and Developments (ST-10)/Validation of the Basis of Experimental Simulation of Heat Transfer between A Building and Surrounding Earth (ST-12)/Evaluation and Validation of Daylighting Model for Inverted Z-Shape Roof Type Mudhosue (ST-13)/High Temperature Desalination by Compound Parabolic Concentrator-tubular Solar Still Coupled with Single Slope Solar Still (ST-14)/Thermodynamic Analysis of a Solar Driven Absorption Refrigeration System (ST-15)/Thermal Performance of Double Slope Floating Cum Titled-Wick Solar Still with the Effect of Water Flowing Over the Glass Cover (ST-16)/Heating/Cooling Potential of Dome-shaped House for Cold Climate of Srinagar (India) (ST-17)/Mathematical Modeling of a Solar Crop Dryer with Biomass Back-up Heater: A Case for Solar-Biomass Hybrid Systems (ST-18)/Experimental Studies on Phase Change Material based Thermal Energy Storage System for Solar Water Heating Applications (ST-21)/Solar Thermal Power Plant Simulator (ST-23)/Experimental Investigation of Convective flow Boiling in the Absorber Tube of the Linear Fresnel Reflector Solar Thermal System (ST-24)/Role of Condensing Covers and Performance of a Double Slope Solar Still (ST-25)/The Effect of Water Depth and Glass Cover Inclination on Thermal Efficiency of Domestic Type Fiber Reinforced Plastic Made Single Slope Solar Still (ST-26)/Experience with Horizontal Earth Air Heat Exchanger in Zogota Colombia for Air Conditioned in Scholar Spaces (ST-28)/Comparison of Cavity Receivers With and Without Mouth Blockage of Different Shapes and Sizes used in Paraboloid Dish Applications (ST-30)/Parametric Based Performance Comparison of Passive and Active Solar Distillation Systems using the Concept of Solar Fraction (ST-31)/Simple Drying Model for Performance Prediction of Solar Dryer (ST-32)/Hybrid Photovoltaic-Thermal (HPVT) Solar Water Heating System: An Experimental Study (ST-33)/New Solar Still with the Suction of Wet Air: A Solution in the Isolated Areas (ST-34)/Exergy Analysis and Carbon Credit Earned from Double Slope Active Solar Still under Natural Circulation Mode (ST-36)/Evaluation of Specific Energy Consumption during Drying of Cylindrical Potato Samples for Different Thickness and Loading Densities (ST-37)/Direct Beam Radiation from Global Radiation for New Delhi (ST-38)/Performance Analysis of a Flat-plate Solar Collectors using Al_2O_3/Water Nanofluid (ST-39)/Heat Transfer Coefficients of a Distiller: Indoor Simulation (ST-40).

Audience – Renewable energy and Solar Energy

Solid Waste Management

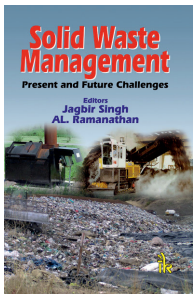
Present and Future Challenges

Editors

Jagbir Singh
AL. Ramanathan

ISBN: 978-93-80026-42-8/Year 2009
Size 16 cm × 24 cm/Pages 272
Paperback/₹ 375.00

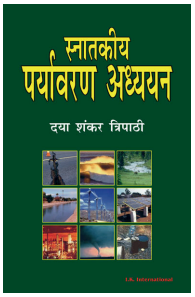
(See on page 19)



स्नातकीय पर्यावरण अध्ययन

दया शंकर त्रिपाठी

ISBN: 978-81-907770-8-7/Year 2009
Size 14 cm × 21.5 cm/Pages 278
Paperback/₹ 345.00



प्रस्तुत पुस्तक विश्वविद्यालय अनुदान आयोग द्वारा निर्धारित पाठ्यक्रम पर आधारित है। पुस्तक में सात अध्याय हैं, जो क्रमशः पर्यावरण अध्ययन की बहुविषयी प्रकृति, प्राकृतिक संसाधन, परिस्थितिक तंत्र, जैव–विविधता एवं इसका संरक्षण, पर्यावरण प्रदूषण, सामाजिक समस्याएँ, पर्यावरण एवं मानव जनसंख्या में विभक्त हैं। पुस्तक में पर्यावरण संबंधी उपयोगी हिन्दी एवं अंग्रेजी शब्दों की सूची भी जोड़ी गई है, जो छात्रों/पाठकों के लिए जानकारीप्रद सिद्ध होगी।

पुस्तक में विभिन्न छायाचित्रों, आरेखीय चित्रों तथा सारणियों के माध्यम से पाठ्य–सामग्री को सरल एवं स्पष्ट किया गया है। पुस्तक को स्नातकीय वर्ग एवं प्रतियोगी परीक्षाओं हेतु ज्ञानवर्द्धन के लिए उपयोगी बनाया गया है।

विषय सूची :

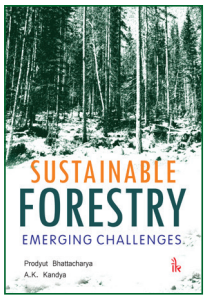
पर्यावरण अध्ययन की बहुविषयी प्रकृति/प्राकृतिक संसाधन/पारिस्थितिक तंत्र/जैव-विविधता और इसका संरक्षण/पर्यावरणीय प्रदूषण/सामाजिक समस्याएँ और पर्यावरण/जनसंख्या एवं पर्यावरण/अनुक्रमणिका।

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Sustainable Forestry

Emerging Challenges



Prodyut Bhattacharya
A.K. Kandya

ISBN: 978-93-84588-99-1/Year 2017
Size 18 cm × 24 cm/Pages 335
Hardback/₹ 2995.00

Forests are critical for sustainable development, environment and also for livelihood. They provide a wealth of goods and services that are essential for people's lives, cash income and green economy. Maintaining and enhancing our planet's forest resources is essential if we are to succeed in the global efforts to alleviate poverty, address water scarcity and biodiversity loss, and mitigate climate change. Culturally and historically, the intrinsic value of forests, and the spiritual and sacred use of forests have great importance to local communities and our cultural identity. This book on Sustainable Forestry: Emerging Challenges, written by experienced academicians, scientists and other researchers shows the present ongoing initiatives in the country to address sustainable forestry and its management. An estimated 230 million people in India rely on forests for their livelihoods to some degree, including some 60 million indigenous people and other forest-dwelling communities. While more than two billion people - the developing world's population use fodder, biomass fuels, mainly firewood, to cook food and large number of non-timber forest products for their day-to-day needs.

Salient Features:

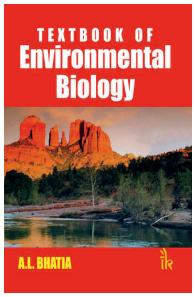
- Aims to make the wide body of collective knowledge and experience about sustainable forest management more accessible to forest managers and other stakeholders.
- A broad, well-researched and up-to-date introduction to many aspects of sustainable forestry.
- Strengthen the meanings and perceptions of SFM against the background of the rapid changes in our natural and social environment.
- Explains the need of integration of Non Timber Forest Products in reference to collection, production, silvicultural technique, transportation, storage, ownership, etc.
- Discusses the ecological status of forest species, endemicity of tree species against the land-use changes of the Achanakmar Amarkantak forests in Central India.

Contents:

Training for Sustainable Forestry in India: Emerging Areas for Holistic Capacity Building/ Forest Certification : Benefits and Issues of Sustainable Forestry/ REDD Plus: Indian Experience towards Sustainable Forestry/ Sustainable Harvesting of Non Timber Forest Products: A Difficult Subject to Achieve/ Pulp and paper industry raw material scenario : ITC Plantation : A case study / Sustainable Management of Natural Gums and Resins in Madhya Pradesh/ Livelihoods Interventions under Joint Forest Management/ Community Oriented Technology Development for Sustainable Forest Resource Management Under Joint Forest Management/ Domestication Status of Non timber Forest products in Madhya Pradesh / Forest products utilization during famine conditions in Raigad district Maharashtra: A case of Thakur tribes/ A study on sustainable harvest of wild medicinal plants of Uttarakhand with a case study on lichens/ The richness and variability of tree species in Achanakmar and Amarkantak forests Central – India/ Assessing carbon sequestration potential of bamboos from Manipur/ Vegetation analysis of Teak-Dipterocarpus forests from Manipur with a note on distribution and diversity/Strategy for Forest Conservation to facilitate Ecosystem services in the context of Climate change/ Afforestation : An effective intervention for sustainable development of fragile desert ecosystem/ Economic management of urban forestry amenities of Chandigarh City, (India)/ Management of Energy Resources in India/ Plant Diversity In Sacred Groves in Madhya Pradesh

Audience – Students, researchers and policy makers in the Forestry sector

Textbook of Environmental Biology



AL Bhatia

ISBN: 978-81-88237-87-6/Year 2010
Size 18 cm × 24 cm/Pages 432
Paperback/₹ 455.00

Textbook of Environmental Biology is meant for the graduate and post-graduate level students studying ecology and environment as part of their curriculum. The author has attempted to give the students the very basics of environment and its related aspects. The book also covers biodiversity at the global, national and local levels, besides various dimensions of environmental biology including topics like El Niño and La Niña effect, ozone layer depletion, pollution caused by various sources, natural disaster management vis-à-vis tsunami, continental drift vis-à-vis earthquake, impact of urbanization, colonization in space sustainable environment etc.

Contents:

Environment/Ecology/Law of Liebig, Shelford and Limiting Factors/Ecosystem/Ecosystem: Abiotic Factors/Ecosystem: Biotic Factors/Energy Flow and Food Chain/Ecological Niche/ Biogeochemical Cycles/Population Ecology/Community Ecology/ Ecological Succession (Changes in a Community)/Habitat Ecology: The Fresh Water Habitat/Marine Habitat/Terrestrial Habitat/ Major Biomes/Environment and Human Beings/Natural Resources: Present Status and Future Needs/Conservation and Management of Natural Resources/Environmental Pollution/Water Pollution/Air Pollution/Soil Pollution/Noise Pollution/Pollution by Pesticides/ Bioaccumulation, Biomagnification and Biodegradation/Green House Effect/El Niño and La Niña Effects/Ozone Layer Depletion/ Radiation and Environment/Natural Disasters/Tsunami/Population and Urbanization/Biodiversity/Wildlife Conservation/Sustainability of the Environment/Index

Audience – Undergraduate and postgraduate students of Environmental Science and Ecology, candidates appearing in competitive exams like IAS, State Administrative Services, NET, SLET, GATE, etc.

Textbook of Environmental Biotechnology



P.K. Mohapatra

ISBN: 978-81-88237-54-8/Year 2006
Size 16 cm × 24 cm/Pages 672
Paperback/₹ 495.00

Environmental Biotechnology was conceived after scanning the available literature in the area, which indicated that references in the subject are scanty and highly sporadic. This book provides comprehensive information on the different aspects of environmental biotechnology and also discusses the processes and new technologies dealing with pollutants, degradation and resource recovery.

It has been designed to serve as a good study material for the students and researchers in the field. At the end of the book there is an exhaustive reference section to guide the readers for additional reading.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Contents:

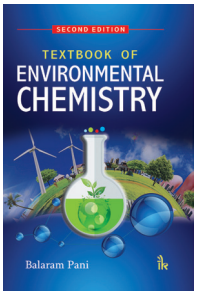
Issues and Scope of Environmental Biotechnology/Management and Remediation of Problem Soils/Bioaccumulation of Toxicants/ Biological Treatment of Wastewater/Treatment of Wastewater of the Food Processing Industries/Biotechnological Approaches to Microalgal Culture/Biodegradation of Organic Pollutants/ Biotechnology for Solid Waste Management/Biodegradation of Pesticides in the Environment/Microbial Transformation of Heavy Metals/Bioleaching and Biomining for Recovery of Resources/ Microbial Transformations of Pesticides/Aquatic Bioassay for Analysis of Pollutants in Surface Waters/Environmental Impact of Pollutants and Analysis of Dose-Effect Relationship/Management of Biological Diversity and Ecosystem Restoration/Biotechnology in Biodiversity Conservation/Modeling of Bioreactors/Biopesticides and Integrated Pest Management/References/Index.

Audience – Students of Environmental Science, Microbiology, Life Sciences, Biotechnology and researchers in these fields.

Textbook of Environmental Chemistry

2nd Edition

Balram Pani



ISBN: 978-93-86768-02-5/Year 2017
Size 18 cm × 24 cm/Pages 594
Paperback/₹ 625.00

Textbook of Environmental Chemistry provides fundamental knowledge of the principles of environment and its chemistry to students as well as teachers of Environmental Sciences, Environmental Chemistry and Environmental Studies at graduate, postgraduate, polytechnic, and engineering levels. This book is also useful for the students and professors of general science.

The book explores biological resources and their relationships with physical and chemical aspects of the environment. Due emphasis has been given to the regional as well as global environmental problems like water, air, soil and noise pollution, their types and sources, and their effects on the ecosystem.

New in this Edition:

Apart from minor additions and deletions wherever required keeping the advancements made recently in view a new chapter. Sampling and Analysis of Environmental Pollution has been added in this edition to make the book up-to-date.

Salient Features:

- Principles and chemical reactions that govern the behaviour of water, air and soil environment.
- Origin of various pollutants and their control.
- New fields of environmental science—Green Chemistry, Environmental Biotechnology, Polymers for Environment.
- Environmental impact, planning and laws to understand how policies and plans are formulated to protect our environment.
- Environmental pollution abatement engineering and technology.

Contents:

Our Environment and Its Chemistry/Fundamental Chemistry for Environment/Earth as a System/Biogeochemical Cycles/Resources/ Atmosphere/Atmospheric Chemistry/Air Pollution/Control of Air Pollution/Aquatic Chemistry/Water Pollution/Control of Water Pollution and Water Treatment/Soil Chemistry/Soil Pollution and Its Control/Noise Pollution and Its Control/Environmental Biochemistry/Polymers for Environment/Toxicology and Toxicological Chemistry/Green Chemistry/Conservation of Nature and Environmental Laws/Sampling and Analysis of Environmental Pollution/Index

Audience – Students of Environmental Sciences, Environmental Chemistry and Environmental Studies at graduate, postgraduate, polytechnic, and engineering levels.

Textbook of Environmental Microbiology

Pradipta K. Mohapatra



ISBN: 978-81-906566-7-2/Year 2008
Size 16 cm × 24 cm/Pages 546
Paperback/₹ 475.00

The present book meets the requirements of the undergraduate students of Microbiology, Biotechnology, Life Sciences and Environmental Sciences. It provides the fundamental knowledge on the microbial diversity, processes and applications in the environment. This can also be used as a source of basic knowledge for the researchers in the field of environmental microbiology.

This book deals with:

Microbial approaches to wastewater treatment/Microbial diversity and processes in different habitats/The microbiology of extreme environments/Microbial remediation of wasteland and pesticide contaminated habitats/Microbial interactions in the environment and their role in the environmental processes/Symbiotic interaction of microbes with plants and animals and their role in ecosystem stability/ The rhizosphere microbiology and its role in plant productivity/ Microbial processes in saline and freshwater habitats/Microbial mobilization of nutrients with special reference to the mobilization of nitrogen and phosphorus/Advanced methodologies to study the microbial diversity and phylogenetic relationship in the environment/ Microbial remediation of the metal contaminated habitats/Microbial mobilization and recovery of valuable metals from low grade ores and diluted solutions/Microbial degradation of recalcitrant pollutants/ Determination of the environmental quality by microbial indication.

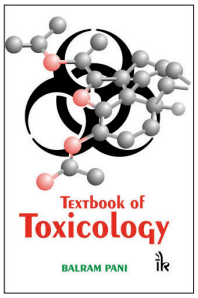
Contents:

Scope and Applications of Environmental Microbiology/Microbial Diversity in the Environment/Microbial Diversity and Processes in Freshwater Habitats/Microbes in Marine and Estuarine Habitats / Microbial Diversity of Terrestrial Environment/Microbial Diversity of Air/Microbes of Extreme Environment/Methods in Environmental Microbiology/Ecological Relationships Among Microorganisms/ Symbiotic Interactions of Microbes/Microbial Mobilization of Nutrients/ Microbial Treatment of Wastewater/Microbes in Metal Pollution Control/Microbial Degradation of Recalcitrant Organic Pollutants/ Bioindication in the Environment Reference/Index

Audience – UG students of Microbiology, Biotechnology, Life Sciences and Environmental Sciences.

Textbook of Toxicology

Balram Pani



ISBN: 978-93-80578-40-8/Year 2010
Size 16 cm × 24 cm/Pages 424
Paperback/₹ 425.00

Toxicology is an interdiscipline that requires the knowledge of many areas such as analytical chemistry both organic and inorganic, biochemistry, pathology and physiology. The book is designed to provide a wide ranging, overview of the various toxicants and their effects on living organisms particularly of human begins.

The book also provides the fundamental knowledge of the principles related to toxicology, chemical toxicology, environmental toxicology and related sciences, so as to meet the challenging requirements of students as well as teachers in environmental sciences, pharmacological,

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info@ikinternational.com

medical, veterinary, biomedical science and toxicological sciences. All essential aspects of toxicology have been covered in this book.

It comprises 18 chapters in a logical sequence. Toxicology is distinguished by up-to-date insight into the harmful interactions between chemicals (xenobiotics) and biological synthesis. It gives better understanding on acute toxicology risk assessment, toxicity testing and many other areas directly or indirectly related to toxicology.

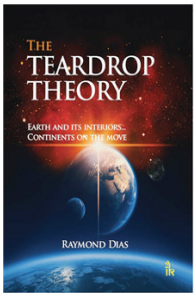
Contents:

Toxicology and Toxicological Chemistry/Principles of Toxicology/ Fundamentals of Chemistry/Toxic Inorganic and Radioactive Elements/Toxic Organic Compounds/Movement and Distribution of Toxins in Environment and Ecosystem/Fate of Toxins/Toxicity/ Toxic Effect of Natural and Synthetic Products/Toxicology of Organs and Organ Systems/Biomarkers/Evaluation of Toxicity and Risk Assessment/Air Pollution/Water Pollution/Toxicity Related to Soil/Ecotoxicology/Mechanisms for Minimizing Toxic Effects/ Applications of Toxicology/Index.

Audience – Students and teachers in Environmental Sciences, Pharmacological, Medical, Veterinary, Biomedical Science and Toxicological Sciences

The Teardrop Theory

Earth and its interiors... continents on the move



Raymond Dias

ISBN: 978-93-86768-47-6/Year 2019
Size: 18 cm × 24 cm/Pages 344
Hardback/₹ 1295.00

A question many of us have always been asking is 'where did we come from?' The question is answered in this book.

In this book — the first in trilogy — we try to understand tectonics; of why lands move over the Earth's surface and the consequences of these movements — be they volcanoes, earthquakes, tsunamis, or mountain building. It is explained now for the first time. However, this subject, still in its infancy, had to bridged by three hypotheses; how did the solar system form, how did the Earth happen and, how and when did the Moon come about; all three critical in understanding 'tectonics'.

- It begins with a parody on our journey through science and our knowledge about the Earth and our universe.
- It puts a closure to the question that Alfred Wegener, the father of tectonics, failed to answer in 1915, and others could do no better for over a hundred years now; as to what is the 'motive force' that moves huge continents and little islands over the Earth's surface.
- It addresses how and why the continents and lands move over the Earth's surface. When their movements create earthquakes, tsunamis, volcanoes, or simply involve themselves in mountain building or such, we understand how the 'earth system' works.
- Having figured out the workings of 'plate tectonics', we begin to learn why our earth is unique – neither gas nor rock like the other eight 'lifeless' planets.
- Tectonics brought a part of Africa to Eurasia to create the Indian peninsula and the Tibetan Plateau, which then gave birth to the six major rivers of Asia that then threw the humanity of the highlands into the lowlands. Having created and spread humanity on to the rice fields of the lowlands, it now helps and maintains the fields along with over half of the world's population.

Contents:

Part-I: '... and let there be earthquakes...'

An unknown journey/... but then, there was light!/A teardrop arrives/The 'fifth' rock/The Soup Cauldron/What changed our minds?/How does it happen?/It is happening .../Why does it happen?/

Part-II: Continents drift while islands scatter

Early Earth's Life/When the equator went south/Asteroids drift in.../ Then Siva struck!

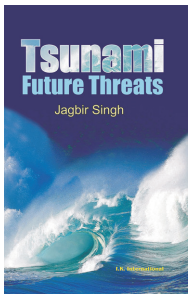
Part-III: Tectonic Output

The cradle of civilization/A Plateau's Legacy to Humanity...

Audience – Anybody who is interested in evolutionary science.

Tsunamis

Future Threats



Jagbir Singh

ISBN: 978-93-80026-24-4/Year 2009
Size 14 cm × 21.5 cm/Pages 222
Paperback/₹ 315.00

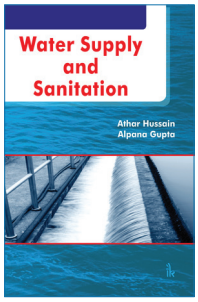
The book deals with the mechanism of Tsunami related environmental problems to India and the role that disaster management will play. Natural disasters are a big challenge for the world community, particularly for India, where the time has come that the government takes responsibility to see that the local people living in the coastal areas must be involved and that the disaster management awareness programme must be compulsory in all schools. This book deals with all the aspects of Tsunamis and their management.

Contents:

Mechanisms of Tsunamis/Origin and Scientific Causes of Tsunamis/ Chronology of World Tsunamis/Ecological & Environmental Impacts of a Tsunami/Future Threats of a Tsunamis/Tsunami Disaster & their Management/Glossary/References/Index.

Audience – Environmental Studies, Environmental Science and Disaster Management.

Water Supply and Sanitation



Athar Hussain
Alpana Gupta

New

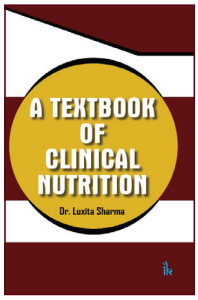
ISBN: 978-93-90620-77-7/Year 2022
Size: 18 cm × 24 cm/Pages 560
Paperback/₹ 525.00

(See on page 24)

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www.techsarworld.com

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

A Textbook of Clinical Nutrition



Dr. Luxita Sharma

ISBN: 978-93-90620-43-2/Year 2022
Size: 16 cm × 24 cm/Pages 422
Paperback/₹ 545.00

The students and professionals in the field of Food and Nutrition require a lot of knowledge about the clinical or therapeutic nutrition. This book serves the purpose of providing the knowledge with the latest updates in the area of nutrition and health. The book provides in-depth knowledge about the nutritional management of the various disorders. It is a complete collection of all the disorders which can be managed with nutrition. This book will help the readers to understand the nutritional needs of the patients and plan the diets scientifically.

Salient Features:

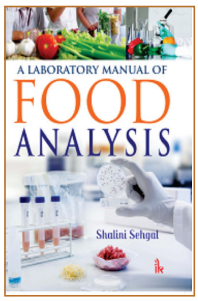
- Nutritional management of all the metabolic disorders with updation and inclusion of recent research.
- Enlightens the readers about the nutrition in endocrine disorders, all types of cancers, febrile disorders, arthritis, osteoporosis. All types of heart diseases with specific diets, diabetes mellitus and the types of insulin used with nutrition, etc.
- All the aspect of role of nutrition in all the disorders that can be cured / managed.
- Diets prescribed in various types of gastrointestinal surgeries such as bariatric surgery or gastric bypass

Contents:

Classification of Diets and Nutritional Assessment Tools/Obesity/ Cardiovascular Disorders/Diabetes Mellitus/Gastrointestinal Disorders and Gastrointestinal Surgeries/ A. Dietary Management in Gastrointestinal Disorders/B. Dietary Management in Gastrointestinal Surgeries/Renal Disorders/Liver Disorders/Inborn Errors of Metabolism/Hormonal Disorders/Cancers/Nutrition in Bone and Joint Disorders/Nutrition in Febrile Conditions/Index

Audience – B.Sc (Home Science)

A Laboratory Manual of Food Analysis



Shalini Sehgal

ISBN: 978-93-84588-84-7/Year 2016
Size: 16 cm x 24 cm/Pages 174
Paperback/₹ 395.00

Food products are analyzed for a variety of reasons, e.g., compliance with legal and labeling requirements, assessment of product quality, determination of nutritional value, detection of adulteration, and research & development. The aim of this book is to provide students the experience in performing food analysis experiments, analyzing data and reporting their findings. It covers the basic principles of analytical procedures and techniques commonly used to provide information about the chemical composition, structure and physical properties of food materials.

The book contains 32 laboratory experiments on component analysis of food such as moisture, ash and minerals, fats and oils, proteins, carbohydrates, pigments and vitamins. Important background information like sampling techniques and preparation of primary and secondary solutions has been included. A ready reckoner on principles and working of various instruments has also been appended at the end of the book.

Salient Features:

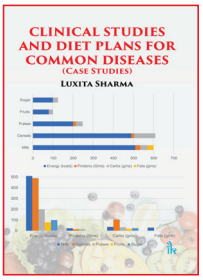
- Information about the proximate analysis of food in a single volume.
- Proper format for recording experiments.
- Principles and working of all essential equipment included.
- Review questions to help in the preparation of viva voce.

Contents:

Proximate Analysis of Food/ Sampling/ Safety Rules For The Laboratory/ Preparation Of Primary And Secondary Solutions/ Component Analysis: (a) Moisture (b) Ash and Minerals (c) Fats and Oils (d) Proteins (e) Carbohydrates (f) Pigments (g) Vitamins (h) Miscellaneous /Instrumental Techniques: (a) Brookfield Viscometer (b) Colorimeter (c) pH Meter (d) Abbe's Refractometer (e) Spectrophotometer (f) Electronic Balance (g) Vacuum Oven/ Related Terms/ References

Audience – Undergraduate students of Food Science and Technology and allied areas like Nutrition, Dairy Science; Food Industry professionals especially Food Processing, Food Packaging and Food Production.

Clinical Studies and Diet Plans for Common Diseases (Case Studies)



Dr. Luxita Sharma

ISBN: 978-93-86768-71-1/Year 2019
Size: 16 × 24 cm/Pages 158
Paperback/₹ 225.00

This book enlightens the readers about the practical aspects of Nutritional Science and its applicability for management of diseases. The case studies are elaborated in such a manner giving examples of rare and common combinations of two or three disorders that occur simultaneously in people and as the consequence the availability of food options is scarce. Such cases are a challenge for a nutritionist /dietician to handle and manage. This book will help the readers in such a manner that they can opt for food options available freely and seasonally. This book guides the readers to prepare and planning of combination diets.

Salient Features:

- Detailed version of diet charts and the foods included/excluded in therapeutic diseases.
- Comprehensive diet charts with cases discussed in detailed manner.
- Innovative knowledge of diseases managed by nutritional modifications and alterations.

Case studies with prescribed diet are covered for following diseases:

- Diabetes mellitus
- Liver disorders
- Gastro-intestinal disorders
- Cardio vascular disorders
- Renal disorders
- Obesity

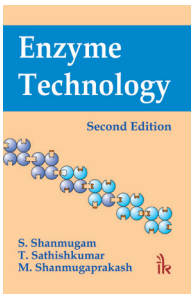
Contents:

Diabetes Mellitus/Liver Disorders/Gastrointestinal Problem/ Cardiovascular Disorders/Renal Disorders/Obesity/ Conclusion/ Glossary/ Index

Audience – Graduate/undergraduates in Home Science (B.Sc.) and Nutrition and Dieticians.

Enzyme Technology

Second Edition



S. Shanmugam • T. Sathishkumar
M. Shanmugaprakash

ISBN: 978-93-81141-59-5/Year 2012
Size 16 cm × 24 cm/Pages 248
Paperback/₹ 345.00

What are enzymes? How do they behave? How are they obtained? What are their uses? This book manages to cover all this .... most of the young workers in R&D of biotechnological industries would find it useful for a quick introduction.

— Current Science, Vol. 96, No. 11, 2009.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

This book gives a broad account of enzymology and aims to put the current knowledge into perspective. The chapters follow a progression from the properties of isolated enzymes to the behaviour of enzymes in increasingly complex systems, leading up to the cell. Included is the discussion on the importance of enzymes in medicine and industry.

This book discusses the behaviour of isolated enzymes, dealing in turn with isolation methods, structural characterization, kinetics, catalytic action and control of activity, immobilization methods and various applications of enzymes. The methods for isolation and characterization of enzymes are now well-established procedures, so the rate at which three-dimensional structures and mechanisms are being determined is increasing dramatically. Ultimately it is necessary to know the behaviour of enzymes in living cells. This involves in part a synthesis of the information obtained from the study of isolated enzymes, but it also requires detailed knowledge of the molecular morphology of the cell, which in turn requires methods for making measurements on intact cells.

The study and applications of enzymes have assumed increasing importance both in medicine and in industry and a discussion of these aspects is therefore given prime importance.

This book will be of immense use to all the UG and PG students of Biotechnology engineering and science students and also to other the sciences students and research scholars.

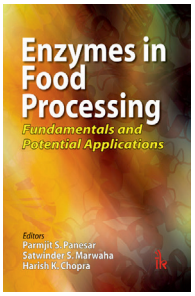
Contents:

Introduction/Enzyme Classification/Enzyme Extraction and Isolation/ Purification of Enzymes/Enzyme Kinetics/Enzyme Immobilization / Enzyme Applications/Enzyme Biosensors/Index

Audience – UG and PG students of Biotechnology Engineering and Science students.

Enzymes in Food Processing

Fundamentals and Potential Applications



Editors

Parmjit S. Panesar
Satwinder S. Marwaha
Harish Kumar

ISBN: 978-93-80026-33-6/Year 2010
Size 18 cm × 24 cm/Pages 384
Hardback/₹ 1495.00

This book reflects an in-depth study of high academic standards dealing in a coherent and lucid way the most comprehensive and advances in application of enzymes in food processing. This indispensable treatise is the product of combined efforts of leading experts of excellent academic credentials in the area of food technology and biotechnology. This unique volume gives a holistic view about the interventions of enzymes in food processing i.e.

- Handles different enzymes used in food processing at one platform.
- Discusses the methods of enzyme immobilization and application of immobilized enzymes in food processing.
- Describes the use of enzymes as food analytical tools including biosensors
- Illustrates the knowledge about novel strategies in enzyme designing.
- Numerous tables and figures throughout the volume provide illustrative material to support the detailed information

The present volume is an excellent resource of information especially for food scientists/technologists, biotechnologists, biochemical engineers, biochemists, organic chemists, graduate and research students.

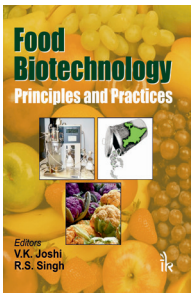
Contents:

Fundamentals of Enzymes/Enzymes in Milk and Cheese Industries/Enzymes in Baking Industry/Enzymes in Fruit Juices and Beverages Industry/Enzymes in Meat Industries/Enzymes in Sugar Industries/Enzymes in Fat, Oil, Flavor and Fragrance Industries/Immobilized Enzymes in Food Processing/Enzymes as Analytical Tools in Food Processing/Novel Strategies for Designing Food Enzymes : Genomics and Proteomics Approach /Index.

Audience – Food scientists/technologists, biotechnologists, biochemical engineers, biochemists, organic chemists, graduate and research students.

Food Biotechnology

Principles and Practices



Editors

Vinod K. Joshi • R.S. Singh

ISBN: 978-93-81141-49-6/Year 2012
Size 18 cm × 24 cm/Pages 930
Hardback/₹ 3495.00

The book is primarily meant for undergraduate and postgraduate classes as a reference-cum-textbook. It would be very useful both from teaching and research point of view. All the chapters in the book are contributed by the experts in their respective fields of research. These are intended to equip the readers with the basics and applied research in food biotechnology. To make concepts more clear, the contents have been divided into following sections:

- Fundamentals of Food Biotechnology
- Production of Food and Feed
- Production of Food and Additives
- Quality Assurance and Waste Management

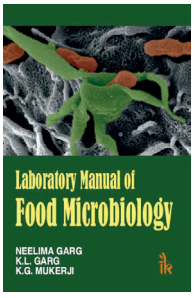
The aim is to develop an authentic account of biotechnology in the food industry and stimulate research in food biotechnology. Unlike the past, the present food industry is profitably deriving benefits from bioengineering. These applied aspects are covered so that the students could take relevant assignments in the food industry. It also highlights future needs of research on the various aspects of food biotechnology. The book includes topics like biosensors, biocolours, biopreservatives, probiotics, genetically modified foods and microbial flavours. The book addresses various disciplines of food microbiology, food biotechnology, food engineering and postharvest technology.

Contents:

Food Biotechnology/Biochemical Engineering in Food Biotechnology/ Genetic Manipulation of Food Microorganisms/Industrial Fermentation Technology/Post-harvest Biotechnology/Solid State Fermentation Technology/Cereals and Cereal Technology/Protein Structure, Rheology and Texturization/Lactic Fermented Foods/Biopreservatives/Microbial Colours/Microbial Flavours/Food and Feed from Microorganisms/ Alcoholic Beverages from Cereals/Organic Acids, Gums, Vitamins and Artificial Sweeteners/Bakers Yeast Production/Probiotics/Indigenous Fermented Foods/Functional Foods/Wine and Brandy/Enzyme Technology/Biotechnology for Waste Management/Instrumental Analysis of Foods/Sensory Analysis of Foods / Food Biotechnology and Marketing/Index.

Audience – Undergraduate and postgraduate students of Food Science, and Biotechnology.

Laboratory Manual of Food Microbiology



Neelima Garg • K.L. Garg
K.G. Mukerjee

ISBN: 978-93-80578-01-9/Year 2010
Size 18 cm × 24 cm/Pages 208
Paperback/₹ 315.00

Principles of Laboratory Food Microbiology serves as a general laboratory guide for individuals in quality control, quality assurance, sanitation, and food production who need to increase their knowledge and skills in basic and applied food microbiology and food safety. This is a very useful book for food industry personnel with little or no background in microbiology or who need a refresher course in basic microbiological principles and laboratory techniques.

Focusing on basic skill-building throughout, the book provides a review of basic microbiological techniques — media preparation, aseptic techniques, dilution, plating, etc. — followed by analytical methods and advanced tests for food-borne pathogens. It reviews basic microbiology techniques to evaluate the microbiota of various foods and enumerate indicator microorganisms. It emphasize on conventional cultural techniques. It also focuses on procedures for detecting pathogens in food, offering students the opportunity to practice cultural and biochemical methods. The final section discusses beneficial microorganisms and their role in food fermentations, concentrating on lactic acid bacteria, acetic acid bacteria and yeast.

It provides an ideal text companion for an undergraduate or graduate laboratory course, offering professors an authoritative frame of reference for their own supplementary materials and to the food processing industry personnel, Government and private organization linked with food processing and microbial quality of the processed product. The book is an essential text for microbiologists working in the food industry, quality assurance personnel and academic researchers.

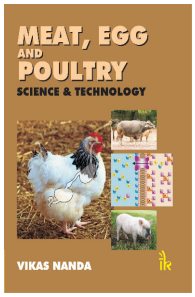
Contents:

Microbiology Laboratory Orientation/Sterilization and Disinfection/ Media Preparation/Microscope/Aseptic Culture Technique/Isolating Bacteria: Pure Culture Technique/ Enumeration of Bacteria/Colony Description/Microscopic Examination of Living Bacteria/Antibiotic Sensitivity Testing/ Biochemical Tests for Identification of Bacteria/ Isolation of Moulds/Enumeration of Yeasts and Moulds in Foods/ Microscopic Examination of Moulds/Microbiological Examination of various Food Materials/Microbial Examination of Canned Foods/ Water Microbiology/Solation and Identification of Common Food Borne Pathogens/Microbial Standards for Different Foods and Drinking Water/Chemical Food Preservatives/Heat Preservation of Microorganisms/ Disinfectants and Antiseptics/Preservation of Microbial Cultures/Food Fermentations/Good Manufacturing Practice Codex Alimentarius and Haccp/Media and Reagents/Index.

Audience – Undergraduate and Graduate in Microbiology Laboratory course, Food Industry, Quality Assurance Personnel.

Meat, Egg and Poultry

Science & Technology



Vikas Nanda

ISBN: 978-93-82332-70-1/Year 2014
Size 18 cm × 24 cm/Pages 298
Parperback/₹ 425.00

The aim of this book is to provide important details of meat composition and its various categories, basics of animal cells and tissues, muscle structure, bio-chemical reactions in pre- and post-mortem muscles and their effect on meat properties, slaughtering of large animals and birds, technology of sausages, egg formation and its quality parameters and various thermal and non-thermal techniques of preserving meat and egg.

Contents:

Part 1: Structure, Composition and Meat Categories: Composition and categories of meat/Animal cell and associated tissues

Part 2: Meat Science: Chemistry and Biochemistry: Biochemical reactions in pre-slaughter and post-mortem muscle/Process of conversion of muscle into meat/Mechanism of muscle contraction and relaxation/Colour, curing and smoking of meat

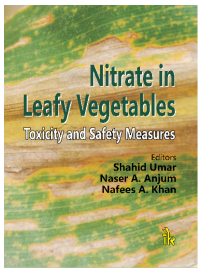
Part 3: Slaughtering and Carcass Processing: Poultry processing/ Slaughter and dressing of cattle/Slaughter and dressing of pig

Part 4: Meat Processing and Preservation: Techniques of preservation of meat/Non-thermal alternative technologies/Technology of sausages

Part 5: Egg Technology: Egg: Formation, structure, and grading/ Egg: preservation and powder production/Index.

Audience – Undergraduate and postgraduate students studying Food Science and Technology, Food Engineering, Agriculture, Veterinary Science, Food Nutrition.

Nitrate in Leafy Vegetables Toxicity and Safety Measures



Editors

Shahid Umar • Naser A. Anjum
Nafees A. Khan

ISBN: 978-93-82332-21-3/Year 2013
Size 18 cm × 24cm/Pages 222
Hardback/₹ 1595.00

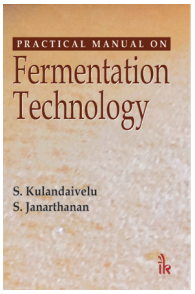
The present book represents the first comprehensive compilation of the latest science of the dietary nitrate sources, potential human health effects and sustainable remedial strategies. This book provides practical, data-driven resources based upon the totality of the evidence to help the reader understand the basics, treatments, and preventive strategies that are involved in the understanding all about nitrate in plants and humans. The overarching goal of the scholarly chapters contributed by worlds' recognized subject-authorities is to provide fully referenced information to plant scientists and health professionals; so that they may have a balanced perspective on the known and potential excess nitrate consumption, and also on the value of various preventive and treatment options that are available as well as will be in the foreseeable future.

Contents:

Contribution of Leafy Vegetables to Dietary Nitrate Intake and Regulations/Nitrate and Edible Plants in the Mediterranean Region of Turkey: An Overview/Pathophysiology of Nitrate Toxicity in Humans and its Mitigation Measures/Nitrate Content in the Edible Parts of Vegetables: Origin, Safety, Toxicity Limits and the Prevalence of Cancer in Iran/Studying Nitrate Accumulation in Spinach and Cabbage Under Organic Conditions/Use of Organic Fertilizers for Crop Nutrition: Impact on Environmental and Threats to Human Health/Nitrate Management Approaches in Leafy Vegetables/Crop, Soil, and Nitrogen Fertilization Management Strategies to Reduce Nitrate Accumulation in Plants/Index.

Audience – Students of Botany, Agriculture & Biotechnology.

Practical Manual on Fermentaiton Technology



S. Kulandaivelu • S. Janarthanan

ISBN: 978-93-81141-80-9/Year 2012
Size 16 cm × 24 cm/Pages 136
Paperback/₹ 295.00

Practical Manual on Fermentation Technology is designed to introduce fermentation technology methods and protocols on the screening of industrially important microbes and production of various industrially important compounds, enzymes, antibiotics, vitamins, etc. by these microorganisms. It also provides assay protocols for the various industrially important microbial products. Each laboratory exercise contains an introductory unit, easy to follow instructions for various media and reagent preparation and procedure for screening of industrially important microbes, production and assay of various fermentation products. This manual will contribute practical knowledge in the area of industrial biotechnology, especially in the area of fermentation technology.

Contents:

Guidelines for Safety/Some Industrially Important Microbes and their Products/Isolation & Optimization of Growth Conditions of some Industrially Important Microbes/Fermenters and Types of Fermenters/Screening of Industrially Important Microbes/Production of Industrially Important Compounds/Assay /Determination of Compounds Produced by Microbes

Audience – Undergraduate and postgraduate students of Microbiology, Industrial Microbiology, Applied Microbiology, Biotechnology, Bioprocesses Technology, Bioresources Technology.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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21st Century Strategic Management Accounting and Performance Measurement Systems



Prem Lal Joshi • Tariq H. Ismail

ISBN: 978-93-90620-00-5/Year 2022
Size 18 cm × 24 cm/Pages 438
Paperback/₹ 1995.00

The world's economy has suffered like never before first by COVID-19 and then by the Russia-Ukraine war. In such a difficult time, the role of Management Accounting and Performance Measurement Systems increases because the organizations have to quest for alternative cost management practices in order to reduce and control costs and improve profitability. Organizations in the 21st century have been witnessing rapid changes in expanded regulatory requirements and technological advances. These changes also impact accounting, it is essential to understand how Management Accounting and Performance Evaluation Systems are transforming locally and globally in order to reap proper opportunities. Environmental factors and organizational factors are believed to be an underpinning theory for challenges faced by management accountants in the 21st century. Needless to state that the role of Management Accounting and Performance Measurement Systems has been transforming the structure and processes of organizations and its acceptability has increased among internal stakeholders in improving the organizations' decision-making processes and performance. This important subject has been embracing new avenues taking place both in theory and practice in view of emerging technologies. The usage of data analytics by accountants to support value creation is increasing. As a part of ethical practices and corporate social responsibility (CSR), organizations are obliged to report on incurring their environmental costs for mitigating the effects of pollution, climatic change, waste disposal, energy, and fuel consumption. Transformation in management accounting and control practices, adoption of innovative techniques such as activity-based costing and management, target costing, performance measurement systems, etc. particularly in the context of developing countries need to be researched in the twenty-first century in order to enhance our knowledge base in the context of competitive advantages of Management Accounting. Value-based management (VBM) helps in making decisions that are helpful for the long-term financial performance. Target Costing (TC) enforces the management to transform their ways of thinking regarding the relation between product cost, selling price, and profitability in the organizations. Enterprise Risk Management (ERM) is to prepare a firm-wide strategy to identify and manage overall risks in all operational areas. Justifying investments with the capital budgeting process is of high importance for future growth and profitability for any organization. In this context, the cognitive heuristics and attendant biases that are likely to colour judgments pertaining to the selection and post-audit stages of investment decisions need to be considered.

Salient Features:

- Provides understanding on how management accounting and performance measurement systems are transforming locally and globally in order to reap proper opportunities.
- Sheds light on the usage of data analytics by accountants to support value creation.
- Provides practical evidences on how businesses do keep account of environmental costs and how those are effectively managed in uplifting the overall profitability.
- Investigates the chief executive officer's narcissist leadership behaviors on organizational values and performance.
- Discusses how enterprise risk management can shape the role of management accountant and bring changes in management accounting scope.
- Explains how the cognitive heuristics and attendant biases that are likely to colour judgments pertaining to the selection and post-audit stages of investment decisions.
- Discusses the increased role of activity-based costing and target costing as tools of cost management in organizations.

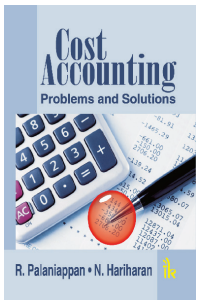
Contents:

1. Transformation of Management Accountants' Roles and Skills in the Twenty-First Century: A Comparative Study between Bahrain and Lebanon./2. Business Analytics and the Changing Role of Management Accountants./3. Management Accounting Innovations and Practices During Economic Crises and the Covid-19 Pandemic./ 4. The Development of Managerial Accounting Practices in Indonesia./5. Environmental Cost Management and Reporting../ 6. The development of Activity-Based Costing (ABC) in a Higher Institution (HEI): A Lesson Learned from Malaysia./7. The Changing Role of Management Accounting System and Performance Management in Organisations./8. Impact of CEO Narcissism on Firm Value./9. Performance Measurement Practices in Indian Companies: A Survey./10. Leadership Narcissism and Firm Performance./11. Cognitive Heuristics and Biases in the Selection and Post-audit Stages of Capital Budgeting./12. The Impact of Covid-19 Pandemic on Participatory Budgeting Practices among Malaysian Local Authority: A Case Sepang Municipal Council of Selangor State and Hang Tuah Jaya Municipal Council of Melaka State./13. Theoretical Retrospective and Prospective of Value-Based Management./14. A Review of Development, Processes, Benefits, and Challenges from Target Costing Implementation./15. Enterprise Risk and Accounting Management: The Case of Egyptian Hospitality Industry./16. Strategic Control and Banking Risk Measurement: Tools and Methodology under Stress Tests./ Index.

Audience – *MCom, MBA, CFA, CA*

Shelving – Management

Cost Accounting
Problems and Solutions



R. Palaniappan • N. Hariharan

ISBN: 978-93-84588-16-8/Year 2015
Size 18 cm × 24 cm/Pages 444
Paperback/₹ 505.00

This book is complementary to the main book "Cost Accounting: Theory and Practice" and all exercises which are given at the end of each chapter are solved in this book. Hence, readers are advised to refer both the books to develop confidence and mastery of the subject. This book will be useful for the students pursuing the courses of B.Com, B.C.S, B.B.A, M.Com, MCS, MBA, MCA, PGDM, PGDFM, CA, ICWA and ACS since problems asked in various universities and professional courses are included.

Salient Features:

- Simple and lucid style of presentation
- Self-explanatory notes at appropriate places
- Step-by-step approach in solving problems.

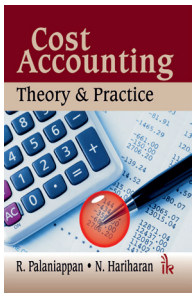
It contains 469 problems and solutions with explanatory notes and hints at appropriate places.

Contents:

Cost analysis: cost classifi cation and cost sheet/Materials cost control/Materials costing/Labour cost control/Methods of wage payment/Overheads–nature and classifi cation/Accounting for overheads and control/Administration, selling and distribution overheads/Cost ledger/Reconcitiation of cost and financial accounts/ Integral accounting/Output costing: unit costing, single costing/Job costing and batch costing/Contract costing: terminal costing/Process costing/Joint products, by-products and main products costing/ Service costing or operating costing/Marginal costing/Budget and budgetary control/Standard costing and variance analysis

Audience – CA, ICWA and ACS at intermediate levels.

Cost Accounting Theory & Practice



R. Palaniappan • N. Hariharan

ISBN: 978-93-80578-34-7/Year 2012
Size 18 cm × 24 cm/Pages 1124
Paperback/₹ 725.00

A managerial emphasis reflects this new movement in cost accounting and expands on it by including the different costs for different purposes theme throughout the text. This comprehensive textbook covers the syllabus of B.Com, BA, BCS, BCA, M.Com, MBA, MCS, MCA, PGDBM, PGDFM, PGDM, and professional courses like CA, ICWA and ACS at intermediate levels. Studying cost accounting is one of the best business decisions a student can make. Why? Because success in any business, from the smallest corner store to the largest multinational corporation, requires the use of cost accounting principles and practices. Cost accounting provides key data to managers for planning and controlling, as well as for costing products, services, and customers.

The book through 'Cost accounting' defines the cost accounting market and continues to innovate today by consistently integrating the current practices and theories.

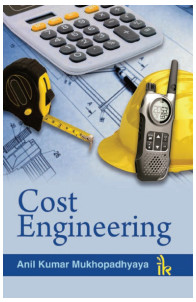
It contains: 22 chapters divided into five parts. Topics are arranged in a logical order and the theory is dealt with in a simple style to make it student-friendly and self-understanding.

Contents:

Introduction/Cost Analysis: Cost Classification and Cost Sheet/ Materials Cost Control/Materials Costing/Labour Cost Control/ Methods of Wage Payment/Over heads: Nature and Classification/ Accounting for Overheads and Control/Administration, Selling and Distribution Overheads/Cost Ledger/Reconciliation of Cost and Financial Accounts/Integral Accounting/Output Costing, Unit Costing, Single Costing/Job Costing and Batch Costing/Contract Costing or Terminal Costing/Process Costing/Joint Products, By Products and Main Products Costing/Service Costing or Operating Costing/Marginal Costing/Budgets and Budgetary Control/ Standard Costing and Variance Analysis/Miscellaneous Topics/ Index.

Audience – CA, ICWA and ACS at intermediate levels.

Cost Engineering



Anil Kumar Mukhopadhyaya

ISBN: 978-93-82332-99-2/Year 2014
Size 16 cm × 24 cm/Pages 128
Paperback/₹ 315.00

In the world of engineers and within the domain of Value Engineering, it is critical to have the knowledge of cost – How cost elements are built up in different industries, e.g., manufacturing, process industry, job shops, etc. The underlying belief is that only with pertinent knowledge can the engineers control and improve costs.

Cost is also a key focus area in certification programs such as the Certified Value Specialist (CVS) program on Value Engineering. Value Engineering practitioners and students find it difficult to assimilate the financial aspects required for qualifying the certification test.

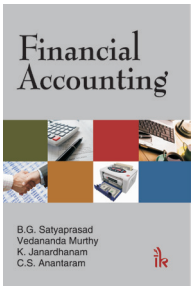
Keeping all this in mind, this book builds on the concept of cost elements, chapter by chapter. Different methods of costing have been discussed in a separate chapter.

Contents:

Introduction/Elements of cost/Direct material cost/Direct labour cost/Direct expenses/Overhead/Methods of costing/Techniques/ Cost model/Standard costing/Glossary/Bibliography/Index

Audience – B. Tech, B.E. and Practising Engineers.

Financial Accounting



B.G. Satyaprasad • Vedananda Murthy K. Janardhanam • C.S. Anantaram

ISBN 978-93-82332-07-7/ Year 2012
Size 16 cm × 24 cm / Pages 240
Paperback/₹ 325.00

Financial Accounting presents the fundamental principles and concepts of accounting. Accounting conventions which are in vogue throughout the world, have been discussed in the book.

Single-entry system played a very important role in accounting, which gradually paved way for a refined form of double-entry system. This aspect has been discussed at length. Concept of trading account, profit and loss account and balance sheet have been explained with appropriate illustrations.

Fundamental concepts of hire purchase, calculation of interest, and risks involved in hire purchases have been explained. Concepts of royalty, rent, lease, and preparation of accounts have been elucidated with appropriate examples.

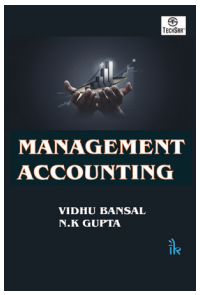
In the recent times many proprietorship and partnership firms are converting themselves into private limited companies for various reasons. The book tries to explain the process of conversion of a partnership concern into a private limited company. Care has been taken to incorporate the latest company law amendments regarding it.

Contents:

Introduction to Financial Accounting/Conversion of Single Entry to Double Entry/Hire Purchase System/Royalty Accounts/Conversion of a Partnership Firm into a Limited Company/Index

Audience – B.Comd

Management Accounting



Vidhu Bansal • N.K. Gupta

ISBN: 978-93-90620-34-0/Year 2023
Size 18 cm × 24 cm/Pages 528
Paperback/₹ 675.00

Management accounting managers use accounting information to maximize profit and minimize losses. It is concerned with the presentation of data to predict inconsistencies in finances that help managers in decision-making and to assist in the management and performance of their control functions.

All the chapters are followed by theory and numerical exercises. The theory is well structured with a large number of illustrations and solved practical problems with exercises consisting of unsolved problems given at the end of each chapter.

This book covers the syllabus ofB.com (Hons) and B.com courses of University of Delhi and undergraduate courses of many other universities.

This book explains how the techniques of management accounting can be used for cost control and decision-making.

Contents:

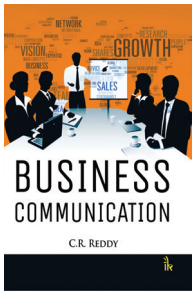
1. Introduction to Management./2. Marginal Costing Cost Volume, Profit (CVP) Analysis./3. Decision Making./4. Budgeting and Budgetary Control./5. Standard Costing and Varlance Analysis./ 6. Responsibility Accounting and Transfer Pricing./Index

Audience – B.com &B.com (Hons)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Business Communication



C.R. Reddy

ISBN: 978-93-84588-63-2/Year 2019
Size 18 cm × 24 cm/Pages 286
Paperback/₹ 395.00

Business Communication encompasses written, reading, oral or spoken and listening skills. Apart from a comprehensive coverage of the theoretical concepts, the book interweaves a large number of thought-provoking situations; important tips and suggestions; and anecdotal examples. With its approach and focus, the UG/PG students of business management and commerce streams and professional courses will find this book an indispensable course book, both in full-time and distance learning programs.

Salient Features:

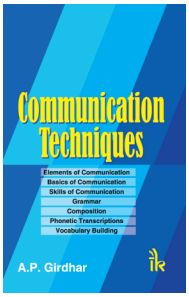
- Comprehensive coverage of theoretical concepts, both in verbal and non-verbal communication, for the students to build a strong background.
- In-text exhibits of thought-provoking situations for the students to analyze.
- End-of-chapter exercises for the students to apply the concepts learned in the chapter.
- End-of-book fifteen short cases with questions, for discussion in the classroom.
- Dedicated chapters on Report Writing, Corporate Communication, and Marketing Communication.
- Special coverage on job application, resumes, group discussion, interview and career seeking.

Contents:

Basics of Communication/Business Communication Management/Methods of Communication/Channels of Communication/Corporate Communication/Media and Modes of Communication/Business Report Writing/Communication Skills in Career Seeking/Marketing Communication/Communication and Listening Skills/Oral Communication/Dialogue/Trends in Business Communication/Analysis of Case Studies/Glossary/Index

Audience – MBA/BBM, B.Com/M.Com.

Communication Techniques



A.P. Girdhar

ISBN: 978-93-82332-24-4/Year 2013
Size 14 cm × 21.5 cm/Pages 280
Paperback/₹ 355.00

This book has been specially designed to explain the fundamentals of the various aspects of communication in the simplest possible language.

The book is divided in two parts. Part one is spread in five units.

The first unit explains the meaning, importance and process of communication. It also explains the objectives of communication, as well as media and types of communication.

The second unit describes verbal and non-verbal communication, formal and informal channels of communication and qualities of good communication.

The third unit explains the barriers to communication, professional communication, interpersonal communication and how to improve it.

The fourth unit discusses important grammatical topics like subject-verb agreement, linking words, relative pronoun. It also includes some common errors with explanation of the rules of grammar to rectify these.

The fifth unit deals with composition, laying particular emphasis on resume writing, writing of business letters, e-mails and telephone etiquettes.

The second part of the book has chapters on phonetic transcriptions and vocabulary building.

Contents:

PART - I / UNIT 1 - ELEMENTS OF COMMUNICATION
1. Communication: Meaning, Importance and Process
2. Objectives of Communication
3. Media and Types of Communication

UNIT 2 - BASICS OF COMMUNICATION
4. Verbal and Non-verbal Communication
5. Formal and Informal Channels of Communication
6. Qualities of Good Communication

UNIT 3 - SKILLS OF COMMUNICATION
7. Barriers to Communication
8. Professional Communication
9. Interpersonal Communication and Methods to Improve it

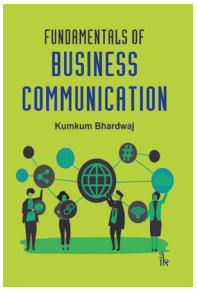
UNIT 4 - GRAMMAR
10. Subject – Verb Agreement (Concord)
11. Linking Words (Conjunctions)
12. Relative Clauses
13. Common Errors

UNIT 5 - COMPOSITION
14. Resume Writing
15. Business Letter Writing: Sales, Credit, Enquiry, Order, Claim, Complaint, Job Applications
16. E-mail Messages
17. Telephone Etiquettes

PART - II (Language Lab)
18. Phonetic Symbols and Transcriptions
19. Word Formation
20. Affixes
21. Listening and Speaking Skills
22. Words often Mis-spelt and Mis-pronounced
23. One Word for Many
24. Synonyms and Antonyms
25. Seminar Presentation
26. Group Discussion
27. Job Interviews

Audience – B. Tech. and Engineering.

Fundamentals of Business Communication



Kumkum Bhardwaj

ISBN: 978-93-85909-71-9/Year 2019
Size 18 cm x 24 cm/Pages 520
Paperback/₹ 645.00

Fundamentals of Business Communication serves as a comprehensive, up-to-date introduction to modern business communication that integrates communication theory and practice for success in business.

Unit 1 covers the fundamentals of the communication, including meaning and definitions, classification, components and process, objectives, medium, directions, channels, functions and types, and scope.

Unit 2 covers the major aspects of verbal, both oral and written. Listening, business presentations, group communication skills, meetings, business etiquettes, conflict resolution have been discussed in this section.

Unit 3 presents a thorough discussion of the various forms of business writing. Here the emphasis is on clear writing, the effect of words, and applications to messages. This section also concentrates

on all business letters, reports, proposals, and modern technological aids for communication.

Unit 4 discusses the written part of the job application, i.e., the application letter and accompanying resume, and elaborates how to create a favourable impression once you arrive for the group discussion and interview.

Unit 5 focuses on the English grammar, comprising vocabulary development, parts of speech, syntax, concord, prepositions, articles, prefixes and suffixes mandatory for successful business writing. This division also explains the basic resources like, sentence end and internal punctuation, rules of order and spacing with punctuation marks, capitalization, etc.

Review questions for practice at the end of every chapter make the text completely learner-centric.

The book also has six appendices. The entire material included in the book is class-tested based on practical and empirical problems of the students.

Salient Features:

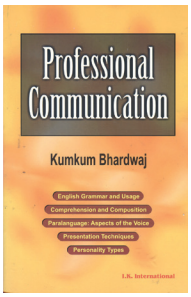
- Comprehensive coverage of real-world business concepts in simple and easy to understand language.
- Dynamics of the communication environment including business communication, interpersonal and group communication, non-verbal, written and employment communication explained in detail with presentation techniques.
- Text is learner-centric, six appendices and objectives laid out as further supplement to text along with the review questions for practice.
- Understanding of business environment with apt problem-solving skills, grammar, punctuations and mechanics for business writing.

Contents:

An Introduction to Communication/Directions of Communication/ Media of Communication/Organizational Communication/Barriers to Communication/Principles of Effective Communication/Listening Skills/Oral Presentations/Team Presentations/Communication with People from Different Cultures/Business Meetings/The Process of Writing/Problem Solving Skills/Business Correspondence/Business Reports/Business Proposals/Modern Communication Devices/ Resume and Job Application Letter/Interview Skills/Language-Basic Tool for Business Communication/Language-Basic Tool for Business Communication/Grammar: Parts of Speech/Aids to Correct Writing: Tenses, Auxiliaries and Modals, Conditionals,Infinitives, Gerunds and Participles,Active and Passive Voice, Subject-Verb Agreement, Prefixes and Suffixes/Developing Effective Sentences/Developing Unified, Orderly Paragraphs/Punctuation and Mechanics of Business Writing/Appendices

Audience – Graduate Engineering and Management courses.

Professional Communication



Kumkum Bhardwaj

ISBN: 978-81-89866-84-6/Year 2008
Size 16 cm × 24 cm/Pages 480
Paperback/₹ 425.00

The present book provides a comprehensive coverage of all the topics of the Professional Communication. It focuses on communication in different contexts, explaining students how to communicate in a variety of situations.

Divided broadly in five units and 33 chapters the book includes:

- English Grammar and Usage.
- Comprehension and Composition.
- Paralanguage.
- Non-verbal Communication and Presentation Techniques
- Application of Behavioural Science.
- Rules of Punctuation and Capitalization.
- Distinction between Similar Expressions.
- Various Types of Common Errors in English.
- Previous Years Question Papers.

Each chapter in the book contains a brief theoretical discussion of the topic and provides guidelines with solved exercises for using the practice material.

Contents:

Unit I: English Grammar and Usage

Parts of Speech/Noun/ Pronoun/Adjective/Verb/Adverb/ Prepositions/Conjunctions/ Interjections/Articles/Tenses/Concord: Agreement of the Verb with its Subject/Structure of Sentence/ Elements of a Series/Active and Passive Voice/Reported Speech Direct-Indirect Narration.

Unit II: Comprehension and Composition

Listening Comprehension Skills/Reading Comprehension Skills/The Art of Comprehension/Paragraph Writing/Precis Writing/Letter Writing/Essay Writing.

Unit III: Paralanguage

Paralanguage: Aspects of the Voice.

Unit IV: Non-verbal Communication and Presentation Techniques

Non-verbal Communication/Presentation Techniques Role-Play/ Debate.

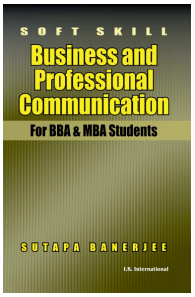
Unit V: Application of Behavioural Science

Personality type/Decision Making/Motivation/Attitude/Thinking.

Appendices : Appendix A-Punctuation and Capitalisation/ Appendix B - Idiomatic Expressions with Prepositions/Appendix C-Distinction Between Similar Expressions/Appendix D-Common Errors/Appendix E-Question Papers/Index.

Audience – B. Pharma, BBA & MBA students and general readers.

Soft Skill: Business and Professional Communication
For BBA & MBA Students



Sutapa Banerjee

ISBN: 978-81-89866-97-6/Year 2008
Size 14 cm × 21 cm/Pages 136
Paperback/₹ 195.00

The present book endeavours to help students involved in business and enterprises to enhance their communication skill.It covers syllabi of BBA and MBA courses.

Salient Features:

- Extensive research in vocabulary–enabling the students to enhance and enrich their communication skills (both oral and written).
- Guidance for writing business correspondence
- Power point presentation.
- A large number of exercises, worksheets, answers and clues.

The book will be useful not only for BBA & MBA students but also for those who want to have a first-hand knowledge of business and professional communication

Contents:

Communication: Principles, Levels and Barriers/Written Communication/Business Correspondence/Handling Business/ Comprehension and Summary/Conclusion.

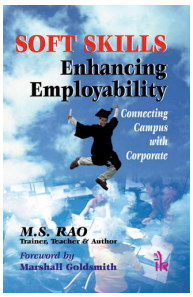
Audience – BBA & MBA students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Soft Skills – Enhancing Employability

Connecting Campus with Corporate



M.S. Rao

ISBN: 978-93-80578-38-5/Year 2010
Size 16 cm × 24 cm/Pages 256
Paperback/₹ 325.00

This is a very timely book. With the world still reeling from the aftershocks of the global credit crunch . Professor M.S Rao offers a number of extremely useful maps to young people who need to navigate the territory of creating their own success in organizational life. He also offers practical help to the reader to develop the soft skills that are so vital in developing effective working relationships.

—**Anne Gimson**, Managing Director, strategic Developments International Limited U.K. and Editor, Development & Learning in Organization - An international journal.

Here is a book which fills a certain vacuum, Professor M.S. Rao unravels the significance of soft skills and provides guidelines to acquire them. A must-read book for all aspiring managers.

Vinod K. Dikshit
Managing Editor - Indian Edition, Leadership Excellence.

"The Direction in which education starts a man will determine his future". **Plato**

Currently there is a wide chasm between the campus and the industry. There is vast gap between the art and the craft. The book helps in connecting the campus with the corporate by bridging the gap between the campus and the industry and by blending both the art and the craft.

It helps you understand and appreciate both soft and hard skills. It differentiates between unemployability and unemployment. It enlightens you about the expectations of employers. It equips you with tools and techniques to enhance your employability. Finally it builds your confidence and competence to bag your coveted job.

The book is divided into three sections. Section I deals with various aspects of soft skills and what constitutes soft skills. Section II outlines the current challenges in the Indian educational system. Section III emphasizes on overcoming the challenges. It unveils the secrets and strategies in enhancing employability.

Contents:

SECTION ONE - SOFT SKILLS

Introduction/What are Soft and Hard Skills?/Communication Skills–Heart of Soft Skills/How to Improve Your Body Language?/ Interpersonal Skills/How to Enhance Your Listening Skills?/How to Sharpen Your Writing Skills?/Presentation Skills/Soft Skills and Johari Window/Conflict Management Skills/Assertiveness for Resolving Conflicts/Change Management/Stress Management/How Can You Excel As a Leader?/How to Build Successful Teams?/How to Motivate Yourself?/Negotiation Skills/How to Enhance Your Creativity?/Managing Your Time/What is Mentoring?/Corporate Etiquette.

SECTION TWO - CHALLENGES

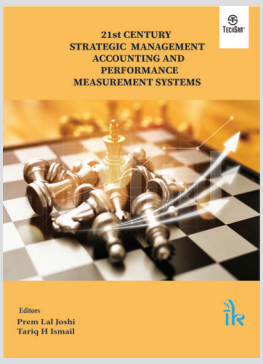
Challenges in Indian Educational System/Soft skills @ workplace/ Soft Skills for Managers/Addressing the Challenges in Management Education/Blending Both Art and Craft for Effective Management Education.

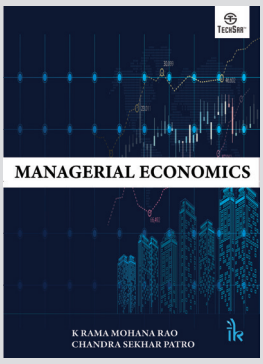
SECTION THREE - ENHANCING EMPLOYABILITY

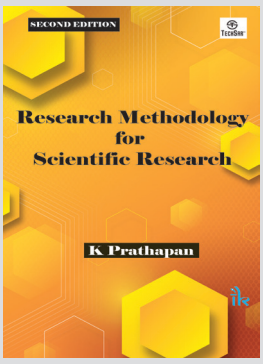
Employability Skills/Can Soft Skills be called Employability Skills?/ How to Enhance Your Employability Skills?/How to Improve Your Soft Skills?/Training and Grooming/Teaching vs. Training/ Soft Skills Training/How to Write Your Resume?/Interview Tips for Freshers/Common Interview Questions/Participating in Group Discussions/Enhancing Employability in Management and Engineering Students/Robert Katz and Soft Skills/Conclusion/ Epilogue/Bibliography/Index.

Audience – Personality Educators, employees, educational, institutions, recruiters.

NEW RELEASES



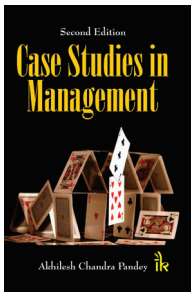




Case Studies in Management

Second Edition

Akhilesh Chandra Pandey



ISBN: 978-93-84588-04-5/Year 2015
Size 16 cm × 24 cm/Pages 296
Paperback/₹ 485.00

This book presents practical understanding of the management problems. Broadly it is meant for the students who have basic training in management or commerce and also for those with little or no formal management background like MCA and Engineering. For management professionals, essential principles and concepts of management that are particularly relevant for understanding the problems of management are highlighted through issues for discussion. Thus, the book is of special value for undergraduate and postgraduate courses like BBA, MBA, MHRD, MIB as well as for B.Tech and MCA. The case material is sufficiently broad in scope and rigorous in coverage to satisfy any undergraduate and postgraduate courses in the field of management.

Each case study provides a descriptive analysis of the critical problems faced by leading organizations. Furthermore, each case study is chosen to reflect and illustrate a specific problem. Each case study contains one relatively successful and the other less so in dealing with one or more of the critical issues or problems. All the case studies have been updated to reflect the latest available information of the corporate world. Issues for discussion in each case are an attempt to explore the various facets of management principles involved for solving the problem.

Contents:

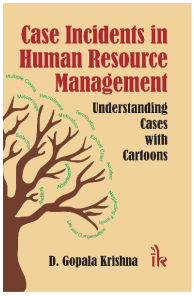
1. Decision Making/2. Guidelines for Case Analysis/Case Studies/1. H.R. Dilemma/2. Avinash Appliances/3. Green Industrial Products Ltd./4. Role Conflict/5. Sri Krishna Paper Mill/6. Communication/7. Retrenchment/8. Fake Currency/9. Smartphone Vs. MP3 Player/10. LCD TV/11. Ice cream War/12. Telecom Services/13. LPG Companies/14. ACT-II/15. Tata Tea/16. Nokia-Collective Emotion/17. SEL/18. Seagull Thermowares/19. Coral Engineers/20. Jhelum Metals and Engineering Corporation/21. Crystal Milk Products Private Limited/22. Telerama Company/23. Starbucks/24. Bajaj Pulsar: Origin of the 'MALE' Species in Indian Bike Industry/25. Poona Coffee House/26. Diesel Marketing Mix/27. Innovation at Procter and Gamble/28. Marketing Research in Product Development: KELLOGG'S/29. Maruti 800/30. Nirma: Brand Values/31. Samsung: How they Did It?/32. Shell Inc./33. The Tata Titans/34. General Motors/35. Nestle India Ltd./36. Serial Entrepreneur/37. David Bruce: An Entrepreneur/38. Philip Green/39. Synergy/40. ASDA/41. General Electric/42. Overseas Packaging Ltd./43. Air France, British Airways and the Concorde Disaster/44. Jollibee/45. Southgate Mall/46. Ford Motors/47. Maturing Metros/48. Retail Sourcing Hub/49. Pantaloon: ERP in Retail/50. Dell Computer Corporation/51. Promotion/52. Lifebuoy/53. Pepsodent Vs. Colgate/54. Sensodyne/55. Consumer Perception/56. Celebrity Vs. Utility/57. Parle-G/58. Deodorant Market in India/59. First Flight Couriers/60. DTDC/61. IndiGo Airlines/62. The Water War/63. AirAsia India/64. Mahindra & Mahindra Ltd./65. Amul/66. Ajanta Biscuits Ltd./67. Frito Lays/68. Energy Drinks/69. Micromax Ad-Campaign/70. GSK Consumer Healthcare/71. Toyota's Crisis Communications Troubles Auto/72. eBay Inc./73. Horlicks/74. Tetra Pak Inc./75. Sun Pharmaceutical Industries Ltd./76. McDonald's Restaurants Built on Motivation/References

Audience – Undergraduate and Postgraduate courses like BBA, MBA, MHRD and MIB.

Case Incidents in Human Resource Management

Understanding Cases with Cartoons

D. Gopala Krishna



ISBN: 978-93-82332-92-3/Year 2014
Size 21.5 cm × 13.5 cm/Pages 144
Paperback/₹ 345.00

Case study is a simulation technique used in the classrooms to make the students understand the corporate real-life problems in depth. Case studies are used as experiential exercises, widely adopted in most of the training programmes and B-schools worldwide. The purpose of case studies is to provide students with experience of the Human Resource Management problems actually faced by the organizations. The critical case studies are complex in nature, through in-depth discussions, students find and evolve multiple solutions to the problems which are cost effective.

Fifty short case incidents presented in this book are based on author's experience and observations in the industry. In the classroom, when these cases are explained, students have shown keen interest and got involved deeply in discussions.

To make the book more student-friendly and entertaining all the cases are illustrated with befitting cartoons.

These case incidents are not only meant for classroom discussions, for commerce, management students and trainees, but can also be used by the corporate executives to seek solutions for complex real-life problems.

Contents:

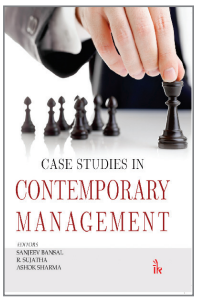
The Ethical Chief/Was the Selection Process Right?/No Requisite Qualification for Work/Wrongful Implication/Safety: A Matter of Life and Compensation/Selection Manipulated/Theft of Company Property/Accident on the Way to Office/Harassment by Colleagues/Death on Tour/Training for Employees/Death by Electric Shock/Multitasking, Boon or Bane?/Miscarriage of Employment/Politicisation of Unions/Cockroach in Food – Industrial Relations Problem/Neglecting the Family/Prolonged Strike and Violence/Cooked-up Recruitment/Multiple Claims of Provident Fund/Tailor-Made Advertisement/Termination During Probationary Period/Auditing the Audit Department/Good Welfare Officer/Misappropriation of Cash/Is it Sexual Harassment?/Deaddiction of Employees/Who is Right? – The Court or Management/Is it Ethical?/Biased Performance Rating/Sleeping While on Duty/Loan Scandal/Cultural Conflict Ends in Violence/Security Check/Doctor's Negligenece Results in Death/Drunken Chief Security Officer/Impersonation/Strike for Coffee Break/Telecom Products to Floriculture – Where is the Connection?/Victimisation of an Honest Officer/Motivational Recruitment/Transfer of Trade Union Leader/Death Relief Committee/Mass Leave/Save PSU Forum/Accident during Lunch Time/Theft in the Stores/Challenges of Creating a New Culture/Promotion on Time Scale/Misuse of Travel Concession Perk.

Audience – BBA and MBA students courses.

Case Studies in Contemporary Management

Editors

Sanjeev Bansal • R. Sujatha
Ashok Sharma



ISBN: 978-93-84588-75-5 /Year 2015
Size 16 cm × 24 cm/Pages 212
Paperback/₹ 405.00

The objective of the book is to present a compendium of management case studies highlighting some of the contemporary issues and problems in business management. These case studies offer experiential learning and will spur the interest of the students, faculties and managers in understanding the various management practices and functions in Indian organizations. A broad gamut of management concepts, practices and challenges have been addressed by the case studies. In all, 24 case studies under three major themes have been presented:

The Influencers: Pockets of Opportunities to Taking a High Road. This section has cases related to new ideas and processes practised by organizations to increase their visibility in the market, creating uniqueness to the products and services offerings, accessing technology to meet the customer expectations and focusing on customer care, improving operational efficiencies and learning to co-create.

Understanding the Business Proposition: Partnering to Scale-up. This section will help readers to appreciate functional topics in the areas of strategy, finance, and financial products and services. It also introduces a few imperatives for understanding the ecosystem of the Indian business environment with special reference to the Growth India story.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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People Management Processes: Art as well as Science. The cases pertaining to this section focus on a wide range of challenges faced by organizations in aligning internal stakeholder exceptions to the business objectives, new-age talent acquisition and retention policies that bring in new people to manage different functions, and emphasizing to create an organizational culture that promotes a conducive work environment.

Contents:

Part I: The Influencers: Pockets of Opportunities to Taking a High Road

Controlling Diesel Pilferage in Sites of Telecom Tower/First Page Priorities of Print Media/Cartels in the Indian Cement Industry: Pinching the Real Estate/Project — 'Raheja Revanta' and Its Strategic Scheme for Survival /Reinventing the Newspaper Industry with ICT Tools/Marketing Strategies for Kara Wipes in Punjab/Effective Embedding of Implant in FMCG Supply Chain at GSKCH/It's Time to Taste Eggless/Dimensions of Service Quality in Banks: Learnings from a BOI Branch

Part II: Understanding The Business Propositions: Partnering to Scale Up

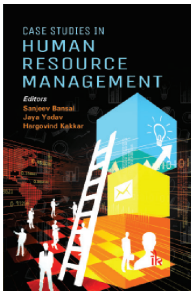
Loan Disbursement in Reliance Capital/Market Strategies for SME Segment in Ludhiana and Chandigarh: A Case of LeasePlan - Vehicle Leasing and Fleet Management Company/Emergence of GST in Indian Economy/ Trends in Working Capital Management: An Analysis of Accounting Ratios /Manufacturing Sector in National Capital Region: Challenges and Opportunities/Risk Management: Perspective on Prevention of Frauds/Working Capital at Narora Atomic Power Stations/A Case on Hypothetical Merger between Molson Coors and Sab Miller Plc

Part III: People Management Processes: Art as Well as Science

Recruitment and Selection at Fedders Lloyd Corporation Limited/ Organization's Culture: A Critical Element for Success!/Attrition Due to Crossfire Politics in Indian Organizations/Talent Acquisition at RJIL/Implementation of Business Performance Management/Rapidly Increasing Dropout Rate of Manpower: Reasons Behind/Introducing New Rating Scale in Punj Lloyd Limited

Audience – MBA students, MDP participants, Managers.

Case Studies in Human Resource Management



Editors

Sanjeev Bansal • Jaya Yadav
Hargovind Kakkar

ISBN: 978-93-84588-85-4/Year 2015
Size 16 cm × 24 cm/Pages 236
Paperback/₹ 435.00

The objective of this book is to present a compilation of Human Resource Management case studies highlighting some of the contemporary issues and practices in the major processes of Human Resource Function. These case studies will offer experiential learning and will spur the interest of the students, faculties and practicing managers in understanding the various HR practices across organizations. In all, 22 case studies under three major themes have been presented:

Contents:

Part I: The Basis of The Function – HR Policy and Talent Acquisition

Market Mapping Enhancing Recruitment Process/Analysis of Recruitment Process at FutureSoft Pvt. Ltd/On Boarding Process - Concerns and Challenges/Revamping HR Policies for Building A Better Organization/Implementation of Telepresence Systems at Bajaj Energy Power Plants/Save Cost or Save time… An Ethical Question

Part II: Skill Building and Developing Competency – Investment in Talent

Comprehending Employee's Training and Development Need Analysis/Analyzing the Training Effectiveness in Motherson Sumi Systems Ltd./Evaluating the Training Needs Identification Process at Alere Medical Pvt. Ltd./Effectiveness of Training and Development Program- A Case of ABC Company/Efficacy of Training Programs at National Fertilizers Limited/Understanding the Impact of Training on Job Satisfaction of Employees/Realizing the Gap Through Competency Mapping: A Case of BB Foods/Enhancement in the Corporate Mentorship Program

Part III: Pay, Reward and Welfare – Talent Engagement

Market Mapping for Source to Pay/Prominence of Employee Benefits in Today's Organizations/Is Happiness and Satisfaction a Rare Commodity?/Eminence of Well-being Concerns at Navin Hospital/ Dynamics of Employee Engagement and Recognition Activities- A Case of A Premier Hotel/Rewarding Employees through Employee Engagement Activities: A Practical Reality?/Drain in IT/Personal Effectiveness – Path to a Better Future

Audience – Management students, MDP participants, HR Practitioners.

Fail-Safe Management: Managing Failure and Succes



Srinivas Shirur

ISBN: 978-93-84588-69-4/Year 2015
Size 14 cm × 21.5 cm/Pages 210
Paperback/₹ 405.00

The objective of this book is to develop an understanding of the reasons for drastic failures, especially by wise people. It is always easier to be wise at the hindsight. Still, fair degree of precautions can be taken to avoid failures.

It takes plenty of efforts and a bit of luck to succeed. It takes a bit of bad luck to fail. It takes super effort to succeed tremendously. But it takes super effort towards stupidity to fail miserably. This book is all about that.

Business schools mainly use case studies of successful people and events for improving students' learning outcomes. Very rarely one comes across case studies about failed stories. Failures are categorized under contingency planning and are considered as an exception. That is the reason why often students find it difficult to cope with failures in actual life and fail to manage them. This book is an effort to develop capabilities in people to manage failures as well as managing success. What we must understand is that failure is part of a process, it's a norm of life and success is an exception. This may sound as the new interpretation of the possibility of success, but it will help us to come to terms with our failures in a much better way.

In this book, the author has reinterpreted success and failure. He has strived to study cases from the lives of those who failed miserably. You will find five cases of promoters of reputed companies and five cases involving employees of firms and owners of small companies who messed up with their professional and personal life. Also, the book highlights four cases of those nations which took wrong decisions after the Second World War, and which changed the course of the world's history. Cases have been selected based on their ability to provide key learning to the readers.

Cases will cover both personality aspect of the protagonist and also background and technical details, which lead to understanding of the reasons for failure and lessons to be learnt from them.

Contents:

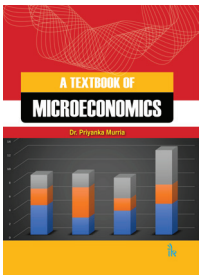
Part I: Individual – Why do People Fail Miserably?/Individual Fiascos/A Stupid Technocrat/The Cunning Stock Broker/A Loving Brother/An Ambitious Manager/Dilemma of a Manager

Part II: Corporate – Corporate Fiasco: Issue of Corporate Governance/ Satyam Fraud: Nemesis of Ramalinga Raju/Enron Embezzlement: Nemesis of Skilling/Comparative Study of Enron and Satyam/ Security Scam: Nemesis of Harshad Mehta/Dismissed From his Own Company: Nemesis of Steve Jobs/Defeated by Overconfidence: Nemesis of Vijay Mallya

Part III: Country – National Fiasco/Vietnam: Nemesis of America/ Vietnam: Nemesis of America/War in Afghanistan: Nemesis of USSR/ Civil War in Sri Lanka: Nemesis of India Part IV: Remedy/Nemesis of Individuals/Nemesis of Companies/Nemesis of Countries/ Conclusion/Index

Audience – MBA Students, Young Managers and Professionals, Corporate Trainers and HR/OB/OD Consultants.

A Textbook of Microeconomics



Dr. Priyanka Murria

ISBN: 978-81-948676-9-2/Year 2021
Size: 18 cm × 24 cm/Pages 410
Paperback/₹ 545.00

A Textbook of Microeconomics: focuses on explaining all the important concepts of Microeconomics keeping in view the syllabus of various universities and management institutes. The book will be of immense help for the students of B. Com and B. Com. (H). It will also be useful as a reference for students of B.A and B.A (H) Economics. Extensive use of tables, flowcharts, mathematical functions, equations, and diagrams has been made to facilitate the learning of the readers. The pedagogical features such as outlines of the chapter, learning objectives, summary, and review questions have also been included. Numerous examples have been included for easy comprehension of the subject matter. In addition to this, the economic relationships have been explained in the boxes to promote understanding in short span of time. Lastly, inclusion of case studies has been done to ensure better understanding of concepts and to stimulate innovative thinking of readers.

Contents:

Introduction to Economics/Applied Economics: Business Economics/Market Equilibrium, Risk and Profit Analysis/Demand Analysis/Price Elasticity of Demand/Elasticities of Demand other than Price/Supply Analysis/Elasticity of Supply/Demand Forecasting/Theory of Consumer's Behaviour: Cardinal Utility Analysis/Theory of Consumer's Behaviour: Ordinal Utility Analysis/Theory of Production and Short Run Production Analysis/Isoquant Approach

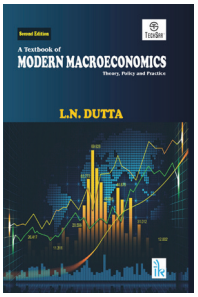
and Long Run Production Analysis/Introduction to Economics/Price and Output Decisions Under Perfect Competition/Price and Output Decisions Under Monopoly/Price and Output Decisions under Monopolistic Competition/Price and Output Decisions Under Oligoply/Income Distribution and Factor Pricing/Index

Audience – B.Com/ B.Com (H)/ B.A/ B.A (H) Economics.

A Textbook of Modern Macroeconomics

Theory, Policy and Practice

(Second Edition)



Dr. L. N Dutta

ISBN: 978-93-90620-89-0/Year 2023
Size: 18 cm × 24 cm/Pages 636
Paperback/₹ 795.00

The book Modern Macroeconomics is adornments with illustrative examples drawing on data from Indian macroeconomy to help students relate the stark theory to the real-world situations. The book is the key reading for undergraduate students, as there are new developments and complications in the world of macroeconomic over the past several years.

The book contains a number of mathematical derivations and conclusions. As such, the students are expected to have a grasp on the basic mathematical techniques even though they are supported by ample graphical illustrations.

The book includes 'business cycles' which, in most cases, originate in the form of 'shocks' of some kind or other, thus posing challenges to macroeconomic management. The book has dealt with, atleast, one such shock in the form of COVID-19 pandemic with its fallout on the world economy.

It may be mentioned here that by the time the book was going to the 'print', another 'shock' of greater magnitude was brewing in the shape of Russia-Ukraine war, threatening to lead to World War-III. However, this macroeconomic shock could not be taken up at its premature stage.

Contents:

Part 1: National Income analysis

National Income Analysis

Part 2: Product Market analysis: Output, Employment and Income Determination

The Classical Theory: Employment and Output in the Long Run/The Keynesian Theory: Employment and Output Determination in the Short Run/Keynesian Theory of Income Determination/Income Determination Model with Government

Part 3: Money Market analysis/Supply of Money and the Banking System/Theories of Demand for Money

Part 4: Integration of Product and Money Markets/The IS-LM Model/Aggregate Demand and Aggregate Supply

Part 5: Post-Keynesian Macroeconomics/Monetarism/New Classical Macroeconomics/Supply Side Economics/New Keynesian Macroeconomics

Part 6: Macro-theories of Consumption/Savings/Macro-theories of Consumption/Savings/Theories of Investment and Capital Accumulation

Part 7: Economic Growth and Business Cycles/Theories of Growth and Development:Macroeconomic Equilibrium in the Long Run/The Business Cycles: Theory and Policy

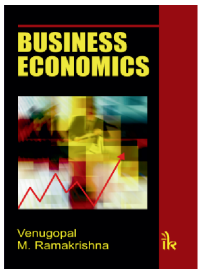
Part 8: Inflation and Phillips Curve/Inflation

Part 9: International Macroeconomics/International Macroeconomics

Part10: Macroeconomic Policies/Modern Macroeconomic Policy: Monetary Policy/ Fiscal Policy/References/Index

Audience: Macroeconomics (Honours).
Shelving:Economics

Business Economics



Venugopal • M. Ramakrishna

ISBN: 978-93-82332-38-1/Year 2013
Size 16 cm × 24 cm/Pages 200
Paperback/₹ 505.00

New economic policy has posed several challenges to the Indian Inc, in particular and Indian Economy in general. It has opened the doors of economy through Liberalization, Privatization and Globalization (LPG). This in turn, brought competition among Indian companies through price, quality, services, work culture, business ethics, transparency and disclosures and so on. The Indian companies tried to learn the management according to western style by integrating Indian sentiments, cultural, social and economic background etc., to succeed in their attempt to sustain and grow in the Indian market. The challenges posed by the LPG have sensitized the growth of several parameters of economic development like investments, employment generation, production, productivity, gross domestic product growth, foreign currency reserves and so on.

This book incorporates contemporary examples in the backdrop of changed economic scenario in India and the world to make the students understand the challenges and opportunities of the present and future.

Broadly the book deals with:

- Demand Analysis
- Supply Analysis
- Market Structure
- Price Policy
- Business Cycles
- Balance of Trade and Balance of Payments
- Foreign Aid

Contents:

Demand Analysis/Supply Analysis/Market Structure/Price Policy/Business Cycles/Balance of Trade and Balance of Payments/Foreign Aid/References/Index

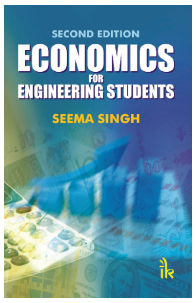
Audience – BBA and MBA Students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Economics for Engineering Students

Second Edition



Seema Singh

ISBN: 978-93-84588-08-3/Year 2014
Size 16 cm × 24 cm/Pages 356
Paperback/₹ 475.00

This is a concise and reader-friendly introduction of Economics to engineering students who do not have prior knowledge of the subject. As engineers need to know economic tools to be able to apply them in their main field, i.e., engineering, the treatment of the book is very simple and takes care of syllabus which is being followed at the engineering programme of the various universities. Apart from introducing main branches of Economics, the book also discusses some advance topics such as forecasting, price determination under perfect competition and monopoly, decision making and linear programming. Subjects such as Operational Research and Accountancy have been discussed which are used in judging economic viability of engineering projects. However, most significant among all, is detailed introduction of Engineering Economics interesting and invigorating is the discussion on 'Elementary Engineering Economic Problems', which will help students to understand and relate application of Economics to engineering problems. Not only to engineering students, the book will also be helpful to students of science or medicine who want to appear for UPSC examination or pursue MBA programme.

Contents:

Part I: Introduction to Economics: Introduction

Part II: Topics of Economics: Microeconomics/Macroeconomics/Indian Economy/International Economics/Public Finance, Economic Development and Planning/Cost Concept and Cost Management

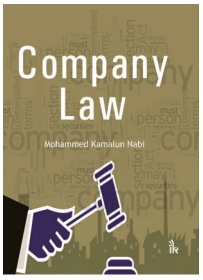
Part III: Topics of Applied Economics: Project Planning/Accountancy/Introduction to Engineering Economic Analysis/Further Analysis on Engineering Economics

Part IV: Interest Factors for Discrete Compounding

Audience – Engineering, Science, Medicine and MBA students.

Company Law

Mohammed Kamalun Nabi



ISBN: 978-93-86768-37-7/Year 2019
Size: 16 cm × 24 cm/Pages 328
Paperback/₹ 445.00

This book presents the Company Law in a manner easily comprehensible to the students. The strength of the book lies primarily in its endeavour to give the intricate provisions of the Companies Act, 2013 in a systematic and logical manner. Proper care has been taken for incorporating the latest amendments. Leading cases have been cited and examples have been given at appropriate places with a view to securing necessary authenticity and clarity of the subject. Sections/ sub-sections have also been given at appropriate places, so that references may be made to the Companies Act for details. At the end of each chapter, exercises are given.

This book is especially designed for Commerce, Business Studies and Management Degree courses at undergraduate and postgraduate levels.

Salient Features:

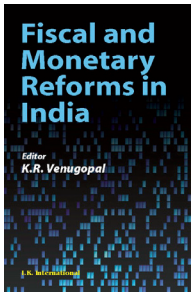
- avoids legal jargons to make the content easily understandable.
- incorporates the provisions of the Companies Act, 2013 and the Rules made thereunder.
- latest amendments to all the Acts have been incorporated.
- essential features of a good and reliable textbook, i.e., precision, comprehensiveness, clarity and utility.

Contents:

Meaning and Nature of Company/Types of Companies/Formation and Incorporation of Companies/Memorandum of Association/Articles of Association/Prospectus/Allotment of Securities/Shares and Share Capital/Membership of a Company/Transfer and Transmission of Shares/Depository System/Calls and Forfeiture of Shares/Company Management/Meetings and Resolutions/Dividend/Accounts/Audit and Auditors/Prevention of Oppression and Mismanagement/Winding up of a Company/Index

Audience – Commerce, Business Studies and Management Degree courses at undergraduate and postgraduate levels.

Fiscal and Monetary Reforms in India



K.R. Venugopal

ISBN: 978-81-89866-23-5/Year 2007
Size 14 cm × 22 cm/Pages 596
Hardback/₹ 695.00

The book is a collection of Memoranda of Professor K. Venkatagiri Gowda addressed to the Former Prime Minister Shri P.V. Narasimha Rao and the present Prime Minister Shri Manmohan Singh. The articles cover a wide range of topics viz. Fiscal Structure, Industry Policy, Bank Restructuring, Exchange Rate of Rupee, Gold Policy, Inflation Management, Deficit Financing, Liquidity Crisis, Oil Fueled Inflation, Foreign Investment, IMF, Foreign Exchange Reserves, Public Expenditure, Budget, Disinvestments, Inflation Trap, Subsidies for Food and Fertilizers, MNCs, Trade Deficits, Public Borrowing, External Debt, Short and Long Term Capital Flows, Banking Policy, Interest Rates, Convertibility, Liberalization, Industrial Sickness, Export-Import Strategies, Subsidies, Industry and Agriculture Growth, Debt Crisis, Wage Freeze. The observations made by him are very critical and useful and are of special interest to postgraduates, research students, academic planners, policy makers and statesmen.

Audience – Postgraduates, Research students, Academic planners, and Policy makers.

Growth, Imbalance and Indian Economy

Editor



K.R. Venugopal

ISBN: **978-81-89866-22-8**/Year 2007
Size 14 cm × 21.5 cm/Pages 586
Hardback/₹ 695.00

Professor K Venkatagiri Gowda was an incisive thinker par excellence. His Economic analysis on the budget were very much valued by the Economists and Administrator in the Country. His work has been internationally valued as definitive and path breaking in the Area of Monetary Economics, International finance and Planing. The book is collection of 83 articles written by Professor Gowda which provide solutions to myriad of Economic problems of our country.

Contents:

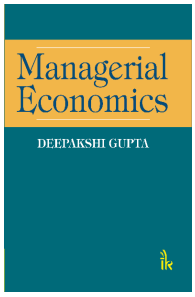
Fiscal Structure/Industry Policy/Bank Restructuring/Exchange Rate of Rupee/Gold policy/Inflation Management/Deficit Financing/Liquidity Crisis/Oil Fueled inflation/Oil Exploration/Oil Crisis /Privatisation of Insurance/Foreign Capital Inflows/Foreign Investment/IMF and its Conditionalities/Foreign Exchange Reserves/Public Expenditure/Budget/Disinvestments/Buyoncy of Indian Rupee/Inflation Trap/Subsidies for food and fertilizers/MNCs/Trade deficits/Public Borrowing/External debt/Short and Long Term Capital Flows/Banking Policy/Deregulation of Interest Rates/Convertibility/Liberalization/Industrial Sickness/

Export-Import Strategies/NRI Investments/Subsidies/Industry and Agriculture Growth/Debt Crisis/Wage Freeze, etc.

The book consists of 83 articles and throws solutions to myriad of Economic problems of our country.

Audience – Postgraduate and Research Students of Finance Management, Economics, Banking, Forex and Agriculture, and Academic Planners and Policy Makers.

Managerial Economics



Deepakshi Gupta

ISBN: 978-93-84588-46-5/Year 2015
Size 18 cm × 24 cm/Pages 640
Paperback/₹ 625.00

Managerial Economics covers all relevant topics under the scope and the subject matter of Managerial Economics. This book is designed to provide the theoretical and applied knowledge of economics for the students of the commerce, management and engineering streams. This book is also germane for competitive exams.

Following are the different dimensions of the book:

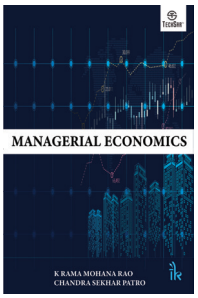
- It contains ample description of different topics.
- It is the blend of topics from micro- and macroeconomics.
- It has application oriented approach.
- Each chapter includes graphs, figures and tables to explain the concepts in an effective manner.
- It contains rich pedagogy such as: Chapter Objectives, Remember Me, Case Studies in Exhibits, Summary, Key Concepts, Review Questions, Multiple-choice Questions and Assignments.

Contents:

Introduction to Managerial Economics/Demand Analysis/Elasticity of Demand/Theory of Consumer Demand/Demand Estimation and Demand Forecasting/Theory of Supply/Production Function/Cost Analysis and Break Even Analysis/Revenue Analysis/Objectives of Firms/Competitive Equilibrium Price/Market Morphology/ Perfect Competition/Monopolistic Competition/Monopoly Pricing and Output Equilibrium/Oligopoly Market/Pricing Policy and Methods/Input Output Analysis/Concepts of National Income and its Measurements/Classical Theory of Employment/Keynes Theory of Employment/Consumption Function/Inflation and its Measurement/Fiscal Policy, Monetary Policy and Government – Key Issues/Business Cycles: Trade Cycles

Audience – Management, Commerce and Engineering streams.

Managerial Economics



K. Rama Mohana Rao
Chandra Sekhar Patro

ISBN: 978-93-90620-02-9/2023
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ 795

Managerial Economics involves an analysis of the allocation of the resources available to a firm, or a unit of management among the activities of that unit. It makes use of concepts and theories of economics and assists managers to make rational decision.

The present book emphasizes on conceptual clarity and simplified presentation. The book comprehensively covers all the aspects that impinge upon economic decision making of modern business units. Thus, allowing a great deal of flexibility in the choice of topics that any teacher or student may wish to cover. This text would be helpful for the students of Commerce, Management, Economics, Engineering, Law, and other social sciences disciplines. It is also useful to the practicing managers of various business units within and outside the country.

The book integrates various concepts and ideas from the fields of economics and other subjects, which have bearing on managerial decision making and policy formulation within the business unit. It provides a number of suitable examples, including large number of review questions, objective type questions and exercises. The text focuses on the concepts related to macroeconomics and business decision, and modern approaches to managerial economics.

Contents:

Section – I: Introduction to Managerial Economics

Concept and Scope of Managerial Economics/Role and Responsibilities of Managerial Economist/Managerial Economics and Business Decisions/Theories of the Firm

Section – II: Demand Analysis and Forecasting

Theory of Demand/Elasticity of Demand/Demand Forecasting/ Demand Forecasting Methods

Section – III: Production and Supply Analysis

Production Analysis/Supply Analysis

Section – IV: Cost Analysis and Cost Control

Cost Analysis/Scale of Economies/Cost Control and Reduction

Section – V: Market Structure and Price-output Decisions

Perfect Competition/Monopoly/Monopolistic Competition/Oligopoly

Section – VI: Pricing Decisions

Pricing Policy/Pricing Methods and Strategies/Promotional Pricing - Discounts and Discrimination/Price Forecasting

Section – VII: Profit Analysis

Profit Policies/Profit Planning and Forecasting/Profit Measurement

Section – VIII: Macro Economics and Business Decisions

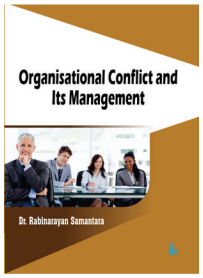
Inflation/Business Cycles/National Income/Goods and Services Tax /Demonetisation

Section – XI: Modern Managerial Economics

Modern approaches to Managerial Economics

Audience: Students of Commerce, Management, Economics, Engineering and Law.

Organisational Conflict and Its Management



Dr. Rabinarayan Samantara

ISBN: 978-93-90620-12-8/Year 2021
Size: 18 cm × 24 cm/Pages 282
Paperback/₹ 395.00

Organisational Conflict and its Management is based upon an in-depth study of various aspects of conflicts occurring in organisations and their management implications. It emphasises upon the importance of constructive management of conflict so as to realise its potential benefits to an organisation. Some of the major research findings of certain empirical studies conducted by the author and relative effectiveness of conflict management styles or methods have been covered in the book. Also, the book focusses on the contingency aspects of conflict management at the workplace and on certain ethical and cultural issues involved in organisational conflict and its management. This book will help the managers to improve their conflict management skills and behaviour and enhance their organisational effectiveness.

Contents:

Introduction/Organisational Conflict: Concepts and Issues/A Review of Organisational Conflict Literature /Conflict Management in Organisations/Management of Senior-Subordinate Conflict: An Empirical Study/Organisational Effectiveness: Concepts, Models and Issues in Measurement/Assessment/Conflict Management Strategies and Organisational Effectiveness: Some Empirical Research Evidences/A Contingency View of Managing Conflicts/Ethical and Cultural Issues in Conflict Management/Concluding Observations/ Appendix 1/Appendix 2/Index

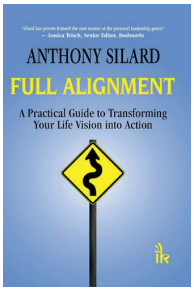
Audience – B.com/M.com/M.B.A Students and Professionals

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Full Alignment

A Practical Guide to Transforming your Life Vision into Action



Anthony Silard

ISBN: 978-93-80578-67-5/Year 2011
Size 16 cm × 24 cm/Pages 296
Paperback/₹ 225.00

What is alignment? How can you find it? In this landmark book, leadership guru Anthony Silard shows you how to bring your life to purpose by transforming your lofty dreams into concrete, deadline-driven goals and then choosing actions on a moment-to-moment basis that are congruent with your deepest values.

The text is divided into three major sections.

• Part 1 helps the reader define their vision for what they want to achieve in life. It helps crystallize possible directions and potential goals. There are motivational and anecdotal sections that give the reader a sense of where they are and where they might want to be going.

• Part 2 walks through building a strong foundation, including developing a clear love-of-self and handling disapproval. The sections describe self-changes needed for transformation.

• Part 3 offers skills that readers can use to move from the foundation towards the vision. Readers are encouraged to follow SMART (Specific, Measurable, Aligned, Realistic and Time-based) steps on their journey. Trusty rules-of-thumb like "under-promise and over-deliver" are echoed. I always remembered this one as "promise silver and deliver gold."

Review:

Silard provides compelling insights, real-life examples, practical do-it-yourself excercises, leadership lessons ranging from Dell and Sony to Churchill and Bono, philosophical insights from Galileo and Goethe to Hillary Swank, Muhammad Ali, adn Gandhi, and a reader-friendly style that make this book a true gem. Full Alignement is a beautifully crafted tapestry of wisdom, personal anecdotes, and extremely useful models that are easy to apply to your own life. Silard has proven himself the new master of the personal leadership genre.

—**Jessica Teisch**, Senior Editor, Bookmarks

I came away feeling reenergized and rejuvenated... Full Alignment is an essential book for CEOs, middle managers, entrepreneurs, rising stars, self-starters, and others who want to embrace change and create and achieve more compelling goals in their work or life.

—**Christine Letts**, Senior Associate
Dean for Executive Education, Harvard University

A true masterpiece! Silard's principles of personal and organizational leadership, when internalized, will unleash tremendous power and deep commitment toward powerful, compelling goals to which you and those around you aspire. --Tien Wong, CEO, Opus8 Corporation

Reviewed by Mark Owens:

Anthony Silard is a big thinker. His book, Full Alignment, is exactly what it says it is: a practical guide to transforming your life vision into action. His audience is people wanting to be more than they are, and this includes not only ladder-climbing business executives, but also confused teenagers looking for non-parental guidance. The former group might use Tony's book to fine-tune their white-collar efforts, while the latter group can use the material as a life long roadmap.

The book is not without weaknesses. If you love your parents, the first formal section called the "The Roadblock" might put you off.

Can you really blame your personality faults on your parents? Probably not, but Silard uses this theme throughout his book. In addition, some of the sub-sections seem disjointed, like the jump from suffering to passion. Perhaps in Tony's seminars he does a verbal segue to make the shift work.

Overall, these are minor issues when considering the strength of the text in full. I liked it best when Silard's voice came through; you can al-most picture him on a stage.

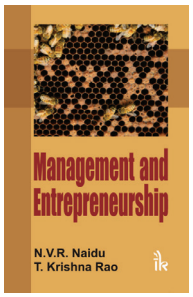
Contents:

Introduction/The Roadblock/Part One: The Direction/Part Two: The Foundation/Part Three: The Skills/The Player and the Spectator

Audience – Self-development personality and education.

Management and Entrepreneurship

N.V.R. Naidu • T. Krishna Rao



ISBN: 978-81-906757-8-9/Year 2008
Size 16 cm × 24 cm/Pages 292
Paperback/₹ 345.00

This book is intended to serve as a textbook for Engineering and Management courses. It seeks to develop an understanding of the concepts of management and entrepreneurship. The chapters are well planned to cover basic functions of small scale industry, institutional support and project preparation.

Salient Features:

- Comprehensive and easy to understand, requires no previous knowledge of the subject.
- Presented in a simple and systematic manner.
- Review questions for the benefit of students.

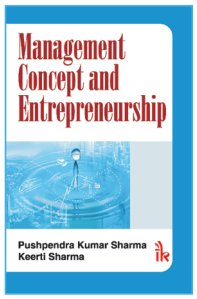
Contents:

Introduction/Management/Planning/Organizing/Staffing/Directing/ Controlling/Marketing Management/Product Development/Sales Management/Cost Accounting/ Entrepreneurship/Small Scale Industry/Institutional Support/ Preparation of Project/Industrial Ownership/Index

Audience – MBA and BBA students.

Management Concept and Entrepreneurship

Pushpendra Kumar Sharma
Keerti Sharma



ISBN: 978-93-82332-01-5/Year 2012
Size 16 cm × 22 cm/Pages 184
Hardback/₹ 315.00

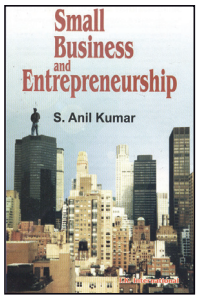
This book is meant for the students of Management & Engineering. It emphasizes the system concepts, management, marketing, productivity and operation management, and entrepreneurship. It gives overall information of the subject. The book attempts to make the subject matter clear and simple with the help of flow diagrams and methodology.

Broadly it discusses:

- System Concepts
- Management
- Marketing
- Productivity
- Entrepreneurship

Audience: Marketing Management.

Small Business and Entrepreneurship



S. Anil Kumar

ISBN: 978-81-90694-23-0/Year 2008
Size 14 cm × 22 cm/Pages 396
Paperback/₹ 375.00

This book presents a wide range of issues involved in entrepreneurship and small industry. The book has 12 chapters divided in two parts.

Part A: Entrepreneurship consisting of Concept of Entrepreneurship, Entrepreneur, Entrepreneurial Competency and Development of Entrepreneurial Competency.

Part B: Small Business: Consisting of introduction to Small Scale Industries, Enterprise Creation, Business Plan, Support Agencies for Implementation of the Project and Sickness in Small Scale Industries.

Salient Features:

- Charts are provided for easy understanding of the concepts
- Proformas.
- Profiles of Successful Entrepreneurs
- Questionnaires
- Skill Development Exercises
- Exercises for self evaluation and objective type and application type questions.

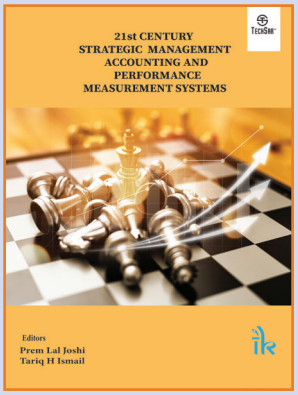
Contents:

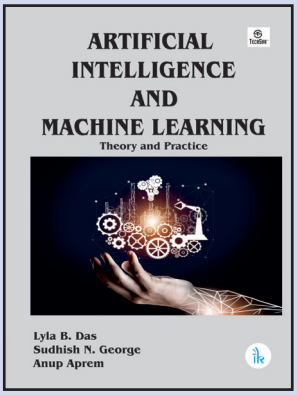
Part A: Entrepreneurship: Concept of Entrepreneurship/ Entrepreneur/Entrepreneurial Competency/Development of Entrepreneurial Competency and Motivation.

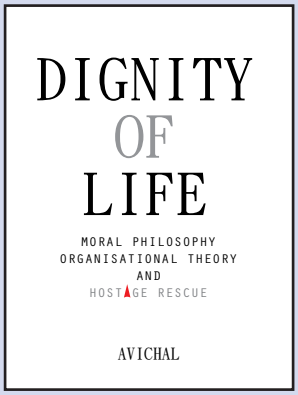
Part B: Small Business: Small Scale Industries/Enterprise Creation/ Business Plan/Implementation of the Project/Industrial Estates / Sickness in Small Scale Industries/Business Crisis/International Entrepreneurial Opportunities/Index.

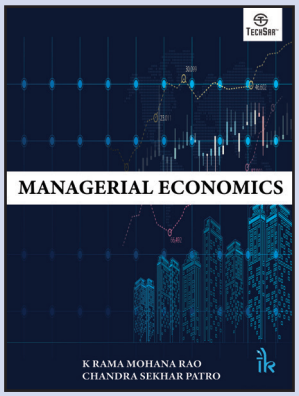
Audience – B.Com., B.B.M., B.E. and MBA students.

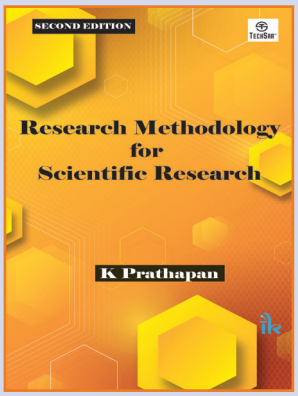
NEW RELEASES







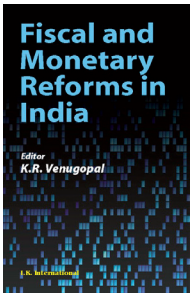




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Fiscal and Monetary Reforms in India



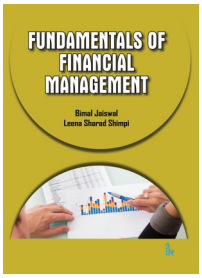
K.R. Venugopal

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Audience – Postgraduates, Research students, Academic planners, and Policy makers.

Fundamentals of Financial Management



Bimal Jaiswal
Leena Sharad Shimpi

ISBN: 978-93-90620-35-7/Year 2022
Size: 18 cm × 24 cm/Pages 464
Paperback/₹ 595.00

This book designed for students of finance, covers the explanation of financial concepts, for easy understanding of the subject. The book extensively covers the basics of finance and the areas included in the major financial decisions – investment decision, financing decision and, dividend decision. It includes case studies for better understanding the practical aspects of the subject. The objective of the book is to teach the students fundamentals of finance and to build a foundation for taking financial decisions which are needed in every aspect of life. This book will help students to understand the tools and techniques for taking financial decisions and their consequences on the financial position of a company.

Salient Features:

- Theory as well as practical problems.
- Formats, exhibits and tables to facilitate the learning and understanding procedure.
- Short type questions and long type questions included.
- Due weightage given to each topic pertaining to the syllabus.
- Study material of high quality and up-to-date information.
- Illustrations and practice problems for easy understanding of the topic.

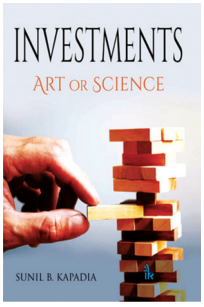
Contents:

An Introduction to Financial Management/Time Value of Money/ Sources of Finance/Valuation of Securities/Leverage/EBIT-EPS Analysis/Capital Structure/Capitalisation/Cost of Capital/ Capital Budgeting/Working Capital: Planning and Management/ Management of Cash and Marketable Securities/Receivables Management/Inventory Management/Dividend Policy and Dividend Theories/Case Studies/Index

Audience – B.com students.

Investments

Art or Science



Sunil B. Kapadia

ISBN: 978-93-84588-29-8/Year 2018
Size 18 cm × 24 cm/Pages 546
Paperback/₹ 745.00

It is a comprehensive volume covering almost the entire gamut of investments – right from the fundamental concepts of investments to the complexities of derivatives and the commodities markets. It covers a variety of investment options with simplified tables thus, providing a useful guide for making good investment decisions. The fundamental considerations for any investor are: safety, liquidity and returns. For the conservative investor, guidance is provided on debt market and, for an adventuresome there is guidance on stock and commodity markets. Clues for risk management are also given.

Discussion on individual/ family risks versus available investment options, highlights and appropriately helps varied types of investors to check out as to what way one should ascertain suitable kind of investment options amongst the many available in the market.

Topics such as fundamental and technical analyses are an added advantage to gain insight. Chapters on "Commodity Markets" and "Foreign Exchange Market" along with regulatory guidelines under FEMA are worth reading to understand the importance of these powerful investment segments — usually not explored by common investors.

This book is recommended for anyone who wants to secure his financial future, as it covers not only investment planning for oneself, but also for future generations through successive planning and testamentary dispositions.

Salient Features:

- Fundamental concepts of investments to the complexities of derivatives and the commodities markets.
- Understanding of investments and diagnosis of various symptoms of an investor as well as varied investments.
- Includes psychological approaches of investor thinking.
- Guidance on debt market, and guidance on stock and commodity markets.
- Clues on risk management.

Contents:

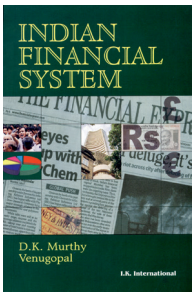
What Investment is all about?/Environmental and Regulatory aspects related to Investments/Structure of Markets in India/ Approaches to Investment decision making/Spectrum of Investment avenues for Investors/Concept of Value and Return (Measuring Investment Returns)/Risk and Return Trade-off (Measuring Total Risk)/Fundamental Analysis – Technical Analysis/Efficient Market Theory/Behavioral Finance/Analysis of Fixed Income Avenues/ An overview of Indian Securities Market/Valuation of Equity Shares (Capital Market Theory)/Commodity Market/Real Estate Market/Foreign Exchange Market/Financial Derivatives Market/ Portfolio Management and Diversification through Asset/Mutual Fund/Insurance Planning/Retirement Planning/Estate Planning (Succession through Registered Will)/a) Tax Aspects relating to Investment Management/b) FEMA guidelines in Investment

Management/Common Errors in Investment decision making/ Guidelines for Investment Management/Presentation of Investment Plan (and Case Study)/Research in Investments/Six Sigma approach for different Investments Models

Audience – For Investors, Management Students, and Professionals.

Indian Financial System

D.K. Murthy • Venugopal



ISBN: 978-81-88237-88-3/Year 2006
Size 14 cm × 21.5 cm/Pages 152
Paperback/₹ 295.00

Indian Financial System explains the changing dimensions of the country's financial set-up owing to the financial sector reforms. The book assesses the Indian financial system in the light of contemporary changes that have taken place in financial markets, mutual funds industry, insurance and banking sectors etc. The book provides a sound theoretical foundation, giving a clear conceptual understanding of the subject. It gives a complete picture of the structure, operations and functions of various components of the Indian financial system. Every chapter in the book begins with the objectives of learning and is followed by objective, analytical and essay-type questions. The book would be useful for graduate and postgraduate level students of commerce, management and economics.

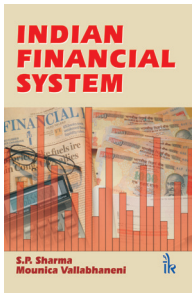
Contents:

Financial System/Commercial Banks/Financial Institutions/ Regulatory Institutions/Banking Innovations.

Audience – Graduate and Postgraduate students of Commerce, Management and Economics.

Indian Financial System

S.P. Sharma
Mounica Vallabhaneni



ISBN: 978-93-81141-53-3/Year 2012
Size 18 cm × 24 cm/Pages 192
Paperback/₹ 315.00

A dynamic financial system helps in the development of a country. Indian Financial System has become dynamic in the last two decades through continuous transformation. The main objectives of this transformational change are to be compatible with the ever-changing economy and be competent with other nation's financial systems. The change is apparent by the range of financial institutions serving the customers and businesses; instruments and services that are available to cater to the needs of the economy and the financial markets, which form a bond between the buyers and sellers.

This book is intended to furnish complete information about the main features of Indian Financial System, various financial markets, services and instruments. This book caters to the need of under-graduate and postgraduate courses in Commerce and Management.

The book is organized in five modules and each one provides a broad view of various aspects of Indian Financial System. The book focusses mainly on the aspects relating to organizations, institutions and regulatory bodies.

Broadly the book deals with:

- Classification of the system and types of financial markets.
- Financial institutions and their working.
- Operations of RBI and SEBI.
- Functioning of various financial services like hire purchase system, lease financing, forfeiting, factoring, discounting, credit rating and so on.
- Recent innovations and technology in the banking sector.

Contents:

Financial System / Industrial Development Bank of India (IDBI) / Regulatory Organisations / Financial Services / Technological Development in Banking Sector / Glossary / *Index*

Audience – UG and PG courses in Commerce and Management.

International Financial Management

V.S. Somanath



ISBN: 978-93-81141-07-6/Year 2011
Size 18 cm × 24 cm/Pages 844
Paperback/₹ 675.00

This book covers the broad spectrum of the theory and practice of International Financial Management. The dominant approach to the development of India since opening up of its economy in the beginning of nineties has been the increasing acceptance of its policies of economic liberalisation and focussed efforts of internationalisation of its businesses. Technology has contributed significantly to the growth and spread of globalization and expansion of international trade and commerce. Economies across the world have opened up and owing to the technological advancements in communication, transportation, and international finance; there are fewer complexities in conducting business across national borders. Further, the rapid strides and innovations in the technological infrastructure have facilitated carrying out international business anywhere at any time on a 24 x 7 basis. Managers in multinational corporations need to be empowered to experience the challenges of international finance. Managers should understand why MNCs and international financial markets behave the way they do. An international finance manager must determine the overall structure of the trade and commerce and has the task of opening businesses in a radically different ecosystem. Hence, the need for qualified and trained personnel to manage international finance is getting growing acceptance worldwide.

International financial managers need to understand the various financial tools such as derivatives, hedging, currency futures and options, exposure netting, price adjustments, balance sheet neutralizing and swaps, the need for exchange rate forecasts, management of forex exposure and how fluctuations in currency value can change the paradigm of international business transactions.

At the end of every chapter, project works and case studies have been included to enable the reader to obtain a deeper understanding of the subject. This book has been written for the postgraduate and doctoral students of business management, commerce, finance and chartered accountants. It will also be useful to the community of teachers, financial executives and also for policy makers in the fiscal and monetary areas.

Contents:

Part I: INTERNATIONAL FINANCE AND FOREIGN EXCHANGE MARKETS

International Financial Management: An Overview / International Monetary System / International Monetary Fund and International Liquidity / International Flow of Funds / Foreign Exchange Market / Forex Rate Mechanism / IRP and International Arbitrage / Derivatives / Currency Futures Market / Currency Options Market

Part II: MANAGEMENT OF FOREIGN EXCHANGE EXPOSURE

Forecasting Exchange Rates / Measurement of Foreign Exchange Exposure / Management of Foreign Exchange Exposure

Part III: MANAGEMENT OF INTERNATIONAL INVESTMENT DECISIONS

Foreign Direct Investment / International Capital Budgeting / Multinational Cost of Capital and Capital Structure / Country Risk Analysis

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

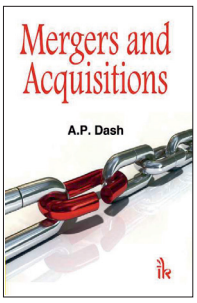
+91-011-43205400
info@ikinternational.com

Part IV: INTERNATIONAL FINANCING DECISIONS

Financial Swaps Interest Rate, Currency and Equity Swaps / International Taxation / International Banking / International Flow of Funds / International Financial Instruments / Management of Current Assets by International Firms / Glossary / Index

Audience – Students of Business Management, Commerce, Finance and Chartered Accountants

Mergers and Acquisitions



A.P. Dash

ISBN: 978-93-80578-15-6/Year 2010
Size 16 cm × 24 cm/Pages 272
Paperback/₹ 475.00

This book is an honest attempt to capture the entire spectrum of M&A activity and share the contours of the implementation process. From valuation to integration, the book is sure to help managers think through what such a strategic move would mean to the organisation. The book attempts to provide working knowledge and skill of underlying concepts, contractual obligations, tax impact and legal background of M&A. Precisely, the book is written to show business managers and financial executives which kind of corporate restructuring can be worked out in the organisation and how best to analyse, design and implement M&A deals.

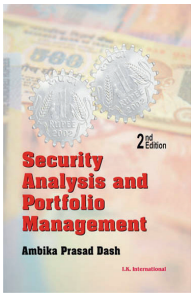
The book can be classified into four basic frameworks. The first three chapters may be clubbed into the conceptual framework, where conceptual issues and economic consequences of M&A are discussed in detail. Critical issues like valuation and due diligence, which forms an integral part of any M&A, are examined with great care to emphasise the framework for pre-merger issues. The legal framework borders on areas like regulatory issues, tax impact, cross-border legal complications, transfer pricing and deal structuring. It is worth mentioning that the structuring of the deals has changed a lot in the recent years under the weight of hundreds of legal precedents, accounting rules and regulatory impositions. The last framework encompasses strategic issues of merger management leading to creation of value to the organisation. Attempt has also been made to find out why mergers fail and how to make them successful. To have a logical conclusion, towards the end, great corporate cases have been presented with high level of clarity and openness to reinforce the learning in earlier chapters. In fact, the cases are the USP of the book.

Contents:

Cross-Border Mergers and Takeovers: A Recent Trend/ Introduction to Mergers and Acquisitions/Genesis of Mergers and Acquisitions/ Business Valuation/Companies Act and SEBI Takeover Code/Legal Procedures for Mergers and Acquisitions/Due Diligence/Merger Management/Strategies for Creating Value Through M&A/ Merger and Acquisitions: Why They Fail and How to Make these Successful/ Cases in Mergers and Acquisitions/References/Index.

Audience – Finance business experts and policy makers.

Security Analysis and Portfolio Management
Second Edition



Ambika Prasad Dash

ISBN: 978-93-80026-13-8/Year 2009
Size 18 cm × 24 cm/Pages 464
Hardback ₹ 515.00
ISBN: 978-93-80026-10-7
Paperback/₹ 495.00

Security Analysis and Portfolio Management endeavours to provide concepts, text and cases for a course on Security Analysis and Portfolio Management, which is widely taught in the business schools around the world. It is consciously planned to help students to acquire knowledge, develop analytical skills and gain insights pertaining to how a fund manager strikes winning strategies for investment by using time-tested, validated and proven techniques which ranges from fundamental analysis to mundane mathematical models.

The book is divided in four broad parts:

- **Part One** describes the global investment scenario, major investment decisions, and the dynamics of the securities markets.
- **Part Two** deals with the critical aspects of risk and returnculminating in Capital Asset Pricing Model (CAPM).
- **Part Three** discusses the most important analysis in investment decisions, wherein good mathematical models are factored in and applied to live conditions through building up case analysis.
- **Part Four** deals with the exotic instruments of derivatives and its applications, where cutting-edge research around the globe is going on.

The book is designed to meet the expectations of common investors as well as hard core professionals (fund managers) in putting the precious resources at risk for higher returns.

New in this Edition:

The following chapters are added to make the book more result oriented, contemporary, focused and comprehensive.

- Dynamics of the Indian economy
- Fundamental Analysis: Valuation of companies
- Performance of mutual fund in India
- Sub-prime crisis and securitization
- Private equity

Contents:

Introduction to Investment/Investment Global Scenario/Securities Markets/Financial Assets and Investment Opportunities/Risk and Returns/Capital Asset Pricing Model (CAPM)/Dynamics of Indian Economy/Fundamental Analysis/Valuation of Companies/ Industry Analysis/Company Analysis/Technical Analysis/ Performance of Mutual Funds in India/Sub-Prime Crisis and Securitisation/ Private Equity/Derivatives/Case Study: Value at Risk/Commodity Derivatives/Case Study: Study of Selected Commodity Derivatives/ Corporate Governance and SEBI Guidelines/Index.

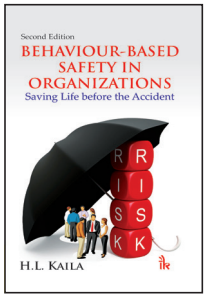
Audience – MBA for course on security analysis and portfolio management.

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Behaviour-Based Safety in Organizations

Saving Life Before the Accident t

Second Edition



HL Kaila

ISBN: 978-93-85909-45-0/Year 2017
Size 22.5 cm × 14.5 cm/Pages 250
Paperback/₹ 435.00

This edition will be immensely useful to organizations in implementing the behavioural safety framework for preventing loss of life due to accidents.

Salient Features:

- Brings forth the need for behaviour-based safety methods, how these can be implemented. The process helps to maintain an account of human behaviour in terms of percentages of unsafe and safe behaviours of workers on a monthly basis.
- Practical problems and how these can be overcome in implementing a sound BBS system have been covered in-depth.
- Based on experiential learning through conducting a number of BBS workshops and safety awareness surveys in Indian organizations.
- Appendices include BBS quizes, checklists, feedback on BBS workshops, material for BBS posters and banners, a case of BBS, pointers, and summary sheets.

Contents:

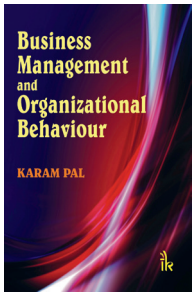
BBS Concepts/ BBS Processes / BBS Implementation/ Organizational Cases on Behavior Based Safety (BBS) in India/ 101 Varied Reflections on Behavioral Safety/ BBS Implementation in a large engineering company/ Emerging Issues and Outcomes of Behavior Based Safety Implementation/ Has Industry Really Prepared For Zero Accident? A Review/ Towards Maintaining Successful BBS Program/ Re-contextualizing Safety Culture through Behaviour Based Safety in Industry / BBS Implementation at an Indian Multinational Organization / संगठनों में व्यवहार आधारित संरक्षा (BBS in Hindi, Tamil, Gujarati languages)

Audience – HR practitioners, safety managers, counsellors, learners and academicians, and reference for the professionals in the field of BBSM.

Business Management and Organizational Behaviour

t

Karam Pal



ISBN: 978-93-80578-99-6/Year 2011
Size 18 cm × 24 cm/Pages 528
Paperback/₹ 505.00

Business Management and Organizational Behaviour is divided into two parts. The first part contains the fundamentals of business management including management process and the second part deals with organizational behaviour. The theories in the book are supported by numerous examples from different business sector. It is written in a simple, self-instructional style for easy understanding. Every chapter begins with an introduction followed by learning objectives, summary and review questions to help students structure their learning. A glossary of key terms has also been appended at the end of the book to enable students to locate the relevant information quickly. The book has been written in accordance with the UGC guidelines and provides comprehensive coverage of the subject.

Contents:

Part A: Management Process : Introduction to Business / Understanding Indian Business / Form of Business Organizations / Commerce, Industry and Trade / Corporate Social Responsibility / Introduction to Management / Evolution of Management Thoughts /Managerial Planning / Decision-Making / Organizing / Authority and Responsibility/Recruitment and Selection/Training and Development/Performance Appraisal/Leadership/Communication /Motivation/Controlling

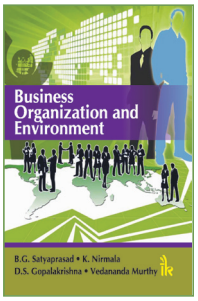
Part B: Organizational Behaviour: Introduction to Human Behaviour/Personality and Human Behaviour/Perception and Human Behaviour/Attitude and Human Behaviour/Learning and Values/Emotional Intelligence and Behaviour/Stress Management and Behaviour/Conflict Management/Organizational Change/ Organizational Development/Leading Management Thinkers: An Overview/Index

Audience – MBA and BBA students.

Business Organization and Environment

t

B.G. Satyaprasad • K. Nirmala
D.S. Gopalakrishna
Vedananda Murthy



ISBN: 978-93-82332-04-6/Year 2012
Size 16 cm × 24 cm/Pages 136
Paperback/₹ 295.00

The subject of Business Organization and Environment has acquired an important status in the field of business studies at the undergraduate level. It embraces the study of the methods, techniques and practices of efficient organizations and management of business.

Business Organization and Environment includes various aspects of business, different forms of business organization, details of the environment in which a business organization operates, role of government in business and so on.

It deals with theoretical concepts, techniques and indigenous illustrations from all the areas. Broadly it deals with.

- Business Organization and Environment
- Forms of Business Organization
- Joint Stock Company
- Business Environment
- Government and Business

Contents:

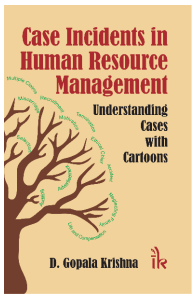
Business Organization and Environment/Forms of Business Organization/Joint Stock Company/Business Environment/Government and Business/Index

Audience – BBA, and MBA students.

Case Incidents in Human Resource Management

Understanding Cases with Cartoons

D. Gopala Krishna



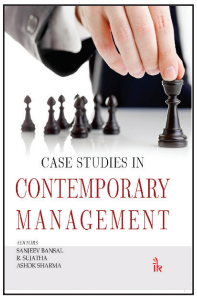
ISBN: 978-93-82332-92-3/Year 2014
Size 21.5 cm × 13.5 cm/Pages 144
Paperback/₹ 345.00

(See on page 256)

Case Studies in Contemporary Management

Editors

Sanjeev Bansal • R. Sujatha
Ashok Sharma



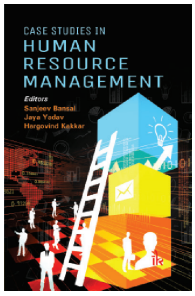
ISBN: 978-93-84588-75-5 /Year 2015
Size 16 cm × 24 cm/Pages 212
Paperback/₹ 405.00

(See on page 256)

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Case Studies in Human Resource Management



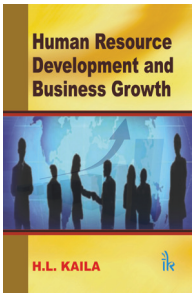
Editors

Sanjeev Bansal • Jaya Yadav
Hargovind Kakkar

ISBN: 978-93-84588-85-4/Year 2015
Size 16 cm × 24 cm/Pages 236
Paperback/₹ 435.00

(See on page 257)

Human Resource Development and Business Growth



H.L. Kaila

ISBN: 978-93-80578-98-9/Year 2012
Size 18 cm × 24 cm/Pages 384
Paperback/₹ 425.00

This book extensively deals with human resource development and business growth and related aspects through comprehensive literature review and Indian case studies. The book shall be useful for students of psychology, commerce, management, and also for practising managers.

The book broadly deals with:

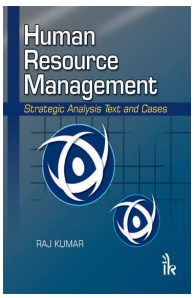
- Attitudes of employees towards Human Resource Planning (HRP) and business growth
- Organization commitment
- Business etiquette and employee values
- Organizational climate and job motivation
- Knowledge Management
- Talent Management
- Performance Management
- Human Capital Index
- Employee Engagement
- Impact of Recession on Various Industries
- Attrition and Retention of Employees.

Contents:

Introduction/Organizational commitment/Relation between business etiquette and values/Exploring the relationship between organizational climate and job motivation/Knowledge management /Talent management/Performance management/Human capital index: valuing people as our greatest asset/Employee engagement / Impact of recession on various industries/Attrition and retention of employees/Index

Audience – HRD, MBA, BBA students.

Human Resource Management
Strategic, Analysis and Cases



Raj Kumar

ISBN: 978-93-80578-82-8/Year 2011
Size 16 cm × 24 cm/Pages 488
Paperback/₹ 505.00

Human Resource Management: Text Strategic Analysis and Cases has been designed to provide the comprehensive knowledge about the subject. The book combines the operational as well as the strategic aspects of HRM. It presents detailed coverage of the principles and concepts of HRM including its strategic aspects. The text provides logical and analytical application of concepts. The strategic analysis involves integrative approach of HRM with strategic management. Case studies have been given at the end of each chapter to subject more practical and analytical.

Salient Features:

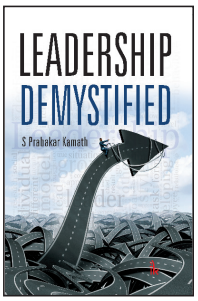
• Covers all relevant topics of HRM. • Integrates operational HRM with strategic management. • Inspires managerial actions to successfully deal with the challenges and emerging trends in HRM. • Provides holistic view of global HRM. • Simple and readers friendly language. • Invaluable text for the students of MBA, M.Com. , and other post graduate students who are specializing in HRM. • Useful guide for HR professionals and executives of corporate section.

Contents:

Human Resource Management – Operational and Strategic/ Human Resource Planning Career Planning and Development/Job Analysis and Job Description/Recruitment and Selection/ Placement and Induction/ Training and Development/Managing Strategic Organizational Renewal/Performance Appraisal and Managing Performance Job Evaluation and Compensation of Employees/Promotion and Transfer/ Human Resource Development/Industrial Relation Trade Union and Employees Welfare/Industrial Disputes and Management of Grievances/ Global Human Resource Management/Index.

Audience – MBA, M.Com. and HR professionals and executives of corporate houses.

Leadership Demystified



S Prabakar Kamath

ISBN: 978-93-84588-42-7/Year 2015
Size 14 cm × 21.5 cm/Pages 144
Hardback/₹ 405.00

"Even those who have been very successful in their leadership roles could benefit from reading the book. What one has done well, intuitively, becomes clearer."

— **M.B. Athreya,** *Padma Bhushan, Thought Leader and Management Advisor*

"A wonderful book for anyone who wants to understand and do things to excel as a leader! Dr Kamath has lived up to his reputation of a master craftsman when it comes to saying difficult things in a simple and an understandable manner."

— **Avijit Das,** *Managing Director & CEO, Eveready (Pty) Ltd., South Africa and Chairman and Founder, Premas Biotech Ltd, India*

"The book is a simple and effective guide to the complex subject of leadership. Dr Kamath has fully leveraged his experience of over three decades to create a unique mix of suggestions, ideas and concepts for becoming an effective leader."

— **Manu Rikhye,** *Managing Director, Encore Capital India*

This book is for anyone who wants to explore, discover, modify and apply behavior, attitude, skills and knowledge to become a successful leader in thought, action or situation. The author has drawn from his long personal and professional experience, Gandhian philosophies, writings of Lal Bahadur Shastri, and saints of wisdom, to demystify the 'mystical halo' around Leadership. In his inimitable style, the author has explored three dimensions of leadership – **Personal effectiveness, Interpersonal effectiveness and Leadership effectiveness.**

Contents:

1. The Beautiful Self

Learning Habits/Goal Clarity/Initiative/Time Management & Prioritisation/Professionalism/Courtesy/Ethics, Honesty & Integrity /Health/Empowerment /Self-Belief/Personal Organization

2. Inter-Personal Relationship

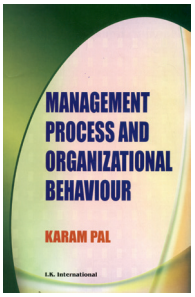
Role Clarity/Relationships & Perception Management/Feedback/ Sensitivity& Empathy/Delegation/Accountability & Responsibility/ Moral Quotient/Spiritual Quotient

3. Emotional Maturity and Intelligence

Objectivity & Perception/Inclusiveness/Service Orientation/ Negotiating for Win-Win/Strategic Thinking & Business Savvy/ Quality Consciousness/Motivating & Developing Self and Others/ Leadership/Communication/Team Working/Change/Innovation and Creativity/Mentoring and Coaching – People Development

Audience – HR/OB/OD trainees, students and apprentices, professionals, anyone having interest in leadership development.

Management Process and Organizational Behaviour



Karam Pal

ISBN: 978-81-89866-04-4/Year 2008
Size 16 cm × 24 cm/Pages 640
Paperback/₹ 525.00

Management Process and Organizational Behaviour is divided into two parts. The first part contains the fundamentals of management and the second part deals with organizational behaviour. The theories in the book are supported by many examples from different business sectors in the Indian scenario. It is written in a simple, self-instructional style for easy understanding of the students. Every chapter begins with an introduction followed by learning objectives of that chapter and is followed by a summary and review questions to help students structure their learning. A glossary of key terms has also been appended at the end of the book to enable students to locate the relevant information quickly. The book has been written in accordance with the UGC guidelines and provides comprehensive coverage of the subject.

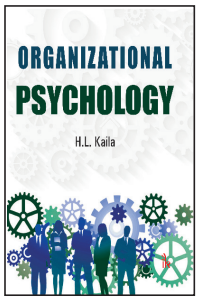
Contents:

Part A: Management Process: Introduction to Management/ Evolution of Management Thoughts/Managerial Environment/ Managerial Planning/Decision-Making/Organising/Authority and Responsibility/Recruitment and Selection/Training and Development/ Performance Appraisal/Leadership/Communication/Motivation/ Controlling

Part B: Organizational Behaviour: Introduction to Human Behaviour/Personality and Human Behaviour/Perception and Human Behaviour/Attitude and Human Behaviour/Learning and Values/Emotional Intelligence and Behaviour/Stress Management and Behaviour/Conflict Management/Organisational Change/ Organisational Development/Total Quality Management/Leading Management Thinkers/Teaching Through Case Study Method/ Glossary/Bibliography/Annexure – I/Index.

Audience – Students of BBA and MBA.

Organizational Psychology



H.L. Kaila

ISBN: 978-93-84588-73-1/Year 2016
Size 18 cm × 24 cm/Pages 328
Paperback/₹ 455.00

This book presents theoretical background, comprehensive literature review, interviews, case studies, and lot of application exercises on all major topics of Organizational Psychology. The main objective of the book is to help students to acquire knowledge and skills, which they would apply in organizations in their professional careers. It covers all major topics such as human resource planning, employee recruitment and selection, training and development, employee engagement and organizational commitment, organizational culture, motivation and job satisfaction, work-life balance, leadership and group dynamics, performance management, and employee counselling. The coverage of research methods and statistical techniques is a major highlight of the book. The book is up-to-date and captures all recent researches in this area.

Salient Features:

- The introductory chapter covers the evolution of Organizational Psychology as a discipline and gives a foundational prologue.
- Each chapter contains an interesting "opening story" which sets the tone of the chapter subsequently.
- All chapters contain margin notes annotated as "good to know" features, which will help the students to get a quick reference for the accompanying material.
- Each chapter has well laid out exercises for classroom discussion, practice, undertaking projects and surveys and so on.

This book is targeted at the undergraduate and postgraduate students of Psychology and Management. It will be also useful to researchers, practitioners and academics in Organizational Psychology.

In praise of the book:

"The book on Organizational Psychology authored by Professor (Dr) H.L.Kaila will bridge the gap of long-felt need for students and researchers in the area. It is singularly different from the other academic publications of the area with its distinct focus on applied aspects with updated review of recent researches and studies in the field of industrial and organizational psychology. It will be extremely helpful for students and members of academic community. The examples will enrich readers to apply the learned concepts in practice."

– Dr Abhijit Gangopadhyay
Formerly Professor & Head
Personnel Management & Industrial Relations
Tata Institute of Social Sciences, Mumbai

"In his book, Dr Kaila has cared much to include the theoretical concepts, researches, case studies and applications of organizational psychology which are of much interest and use to not only the students who would study this subject matter in much depth, but also to the practicing managers in organizations. The content coverage is quite wider than the books available currently. The best aspect about this book is 'the research cases based on Indian organizations' included in every chapter of this textbook which is very useful for students."

– Jitendra Mohan
Professor Emeritus of Psychology
Panjab University, Chandigarh

"Dr. Kaila in this book on Organizational Psychology has adopted a very practical approach to make theoretical concepts easy to understand through case studies in Indian perspective. The book written by Dr. Kaila keeping in mind the students is actually also very useful for HR practitioners and anyone having interest in and keen to know all about Industry, Management, Organisation and its psychology. The topics are comprehensive, relevant and generate interest. An Interesting read indeed!",

– Anil Kaushik
Management Expert & Chief Editor
'Business Manager' - HR Magazine, Alwar (Rajasthan).

Contents:

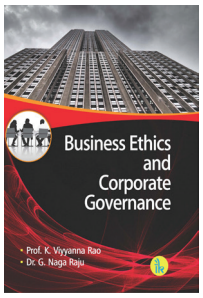
An Introduction to Industrial/Organizational Psychology/Research Methods/Human Resource Planning/Management/Employee Recruitment and Selection/Training and Development/Employee Engagement and Organizational Commitment/Organizational Culture and Performance/Motivation and Job Satisfaction/Work-Life Balance/Safety at Workplace/Leadership and Group Dynamics/ Performance Management/Employee Counselling/Statistical Techniques/Index

Audience – BA and MA Psychology, B.Tech (Industrial Psychology), MBA, HR/OB students, researchers in I/O Psychology.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Business Ethics and Corporate Governance



K. Viyyanna Rao • G. Naga Raju

ISBN: 978-93-85909-73-3/Year 2017
Size 18 cm × 24 cm/Pages 584
Paperback/₹ 625.00

The present volume is a contribution to the Literature in the disciplines of Commerce and Management. It covers a wide spectrum of issues from Governance to Ethics. What contributes to the survival of a business is its sincerity to the people of the Society. Keeping this as the core of the discussion, the Book covers the topics including Governance Practices in India and abroad, the Role of Board of Directors, Independent Directors, Audit Committee and Auditors. The Book also contains the discussion on the Role of SEBI, Stock Exchanges and the Government of India. An analysis on the provisions incorporated in the New Companies Act, 2013 is unique. Another major part of discussion in the Book pertains to the precept and practice of ';Corporate Social Responsibility'. Presentation of Live Cases drawn from the contemporary developments is the yet another highlight of the Book. Against this background, it is expected that his present volume would arise a great amount of interest and discussion among the Faculty and Students of the Business Schools.

Salient Features:

- Easy narrative style, with an attempt in the direction of sensitizing the people of the country towards business practices.
- Provides various ideas and tools for implementation of ethics with the help of qualitative and quantitative analysis and interpretation.
- Incorporates corporate governance reforms and best practices for a global perspective and business ethics from behavioural and applied aspects.
- Provides maximum flexibility in presenting the amount and order of materials on corporate governance and business ethics.
- Provides live and practical examples in the form of case studies/ exhibits at relevant places in the chapters.
- The cases cited in this book are a testimony to the contemporary practices.

Contents:

Ethics: Concept and Sources/Values/3. Business Ethics/Functional Areas of Business and Ethics/Corporate Governance Abroad/ Corporate Governance in India-An Overview/SEBI's First Committee on Corporate Governance[Shri Kumar Mangalam Birla Committee]/ SEBI's Second Committee on Corporate Governance[Shri NR Narayana Murthy Committee]/CII's Task Force on Corporate Governances[Naresh Chandra Committee]/Clause-49 of Listing Agreement of BSE/Role of Board of Directors/Role of Independent Directors/Role of Audit Committee/Role of Auditor under the Companies Act, 2013/Role of Securities and Exchange Board of India [SEBI]/Corporate Governance Rating Methodologies/Reporting Practices of Companies on Corporate Governance- Survey of Annual Reports/Corporate Social Responsibility – Meaning and Scopes/ Corporate Social Responsibility in Today's Business Context/Towards an Ethical and Sustainable Organisation/Case Study-1 The Case of 'Santhara' – Is it Salvation or Suicide?/Case Study-2 Dadri Incident: It is an Outrage against Freedom of Food?/Case Study-3 Rigging of Diesel Emission Tests by Volkswagen-A Breach of Trust/Case Study-4 Payment of Bribes by Walmart in India/Case Study-5 Coca Cola and the Water Exploitation – Is the Company Drinking the World Dry?/Case Study-6 Corporate Lobbying – Is it Ethical or Unethical?/ Case Study-7 Clinical Trials by Pharmaceutical Companies – Are Human beings used as Guineapigs?/Case Study-8 Labour Trouble at Maruti Suzuki's Car Plant in India: Who is at Fault?/Case Study-9 The Deposits Issue of Sahara – Can it be termed contagious to the Indian Financial System?/Case Study-10 The Gas Dispute between ONGC and Reliance – Is it a Case of Theft?

Audience – Research scholars and students of MCom and MBA.

Business Ethics

Foundation for Corporate Social Responsibility and Governance



P. Kamatchi

ISBN: 978-93-84588-13-7/Year 2015
Size 16 cm × 24 cm/Pages 368
Paperback/₹ 525.00

Ethics is beyond business. Ethical practices in the business and marketing activities sustain in the long run. There needs to continuous improvement, transparency, compassion, truthfulness and respect in business practices by the corporates.

This book on business ethics and corporate governance has a mixture of concepts, opinions, perceptions and practices in the various activities of business. It contains research case studies and examples of various activities of business. It goes deeper into the realities based on research studies. The book presents blend of various corporates opinions, perceptions and practices on corporate social responsibilities, business ethics, ethical issues in marketing by concentrating on the factors such as product, pricing, advertisement and sales and distribution.

Contents:

Business ethics/Personal ethics/Ethics in management/Marketing ethics/Corporate social responsibility/Role of corporate culture in business/Perception and practices of marketing in business ethics/ Index.

Audience – U.G. and P.G. students of Business Management.

Business Law



S.P. Sharma

ISBN: 978-93-81141-82-3/Year 2012
Size 18 cm × 24 cm/Pages 260
Paperback/₹ 385.00

Business Law caters to the needs of both undergraduate and postgraduate students in Commerce and Management streams. Written in lucid language it deals in a detailed manner with:

- Indian Contract Act, 1872
- Intellectual Property Legislations
- Environment Protection Act, 1986
- Consumer Protection Act (COPRA), 1986
- Foreign Exchange Management Act, 1999
- Cyber Laws and the Information Technology Act, 2000
- The Competition Act, 2002

It contains the definitions of all the important terms with objectives of each Act. Each chapter concludes with a question bank which will help the students in preparing for examinations.

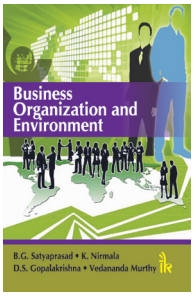
Several examples have also been included to explain the law and its practical relevance. There are case laws which add to the value of the book. In all an attempt is made towards knowing business law clearly.

Contents:

Introduction/Indian Contract Act, 1872/Intellectual Property Legislations/Environment Protection Act, 1986/Consumer Protection Act (COPRA), 1986/Foreign Exchange Management Act, 1999/Cyber Laws and the Information Technology Act, 2000/The Competition Act, 2002/Index

Audience – UG and PG courses in Commerce and Management.

Business Organization and Environment



B.G. Satyaprasad • K. Nirmala
D.S. Gopalakrishna
Vedananda Murthy

ISBN: 978-93-82332-04-6/Year 2012
Size 16 cm × 24 cm/Pages 136
Paperback/₹ 295.00

The subject of Business Organization and Environment has acquired an important status in the field of business studies at the undergraduate level. It embraces the study of the methods, techniques and practices of efficient organizations and management of business.

Business Organization and Environment includes various aspects of business, different forms of business organization, details of the environment in which a business organization operates, role of government in business and so on.

It deals with theoretical concepts, techniques and indigenous illustrations from all the areas. Broadly it deals with.

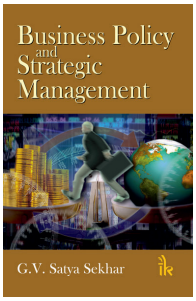
- Business Organization and Environment
- Forms of Business Organization
- Joint Stock Company
- Business Environment
- Government and Business

Contents:

Business Organization and Environment/Forms of Business Organization/Joint Stock Company/Business Environment/Government and Business/Index

Audience – BBA, and MBA students.

Business Policy and Strategic Management



G.V. Satya Sekhar

ISBN: 978-81-907770-7-0/Year 2010
Size 16 cm × 24 cm/Pages 288
Paperback/₹ 355.00

The knowledge of business policy and techniques of strategic management is the need of the hour to prospective business managers. The present competitive environment has brought several drastic changes in policy making and strategic management. Hence, there is necessity of theoretical understanding about the business policy as well as strategic management. Most of the organizations have started adopting strategic management system. This book focuses on conceptual approach to the subject as well as some select case studies, which make a foundation to the knowledge of strategic management.

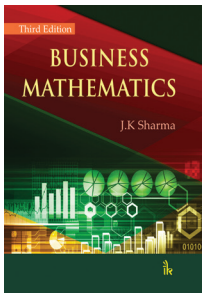
Contents:

Introduction/Process of Strategic Management/Corporate Capability Analysis/Strategy, Structure and the Strategist/ Environment Analysis and Diagnosis/Business Strategy Analysis/Functional Strategies/ Corporate Financial Strategies/Strategies and Project Implementation/ Strategy Alternatives/Strategy Evaluation and Control/Strategies for Global Business/Appendix/Case Studies/Index.

Audience – BBA & MBA students.

Business Mathematics

Third Edition

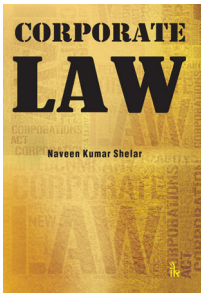


JK Sharma

ISBN: 978-93-85909-14-6/Year 2016
Size 18 cm × 24 cm/Pages 744
Paperback/₹ 695.00

(See on page 132)

Corporate Law



Naveen Kumar Shelar

ISBN: 978-93-85909-02-3/Year 2016
Size 18 cm × 24 cm/Pages 368
Paperback/₹ 455.00

This book introduces Corporate Law to the law students, management students and other professionals to give an analytical view added with new and contemporary topics along with selected and organized chapters, comparative analysis of old and new Acts, reference to old and new Sections, latest amendments & rules with reference to other laws, landmark judgments of various courts of law with the help of illustrative diagrams, charts, key points and so on. New concepts, responsibilities, rights and formalities have been restructured in the new Companies Act and in Negotiable Instruments Act.

Salient Features:

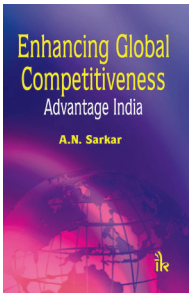
- Gives a detailed exposition of the Companies Act and the subsequent amendments and bills includes the latest 2015 (Amendment) Act.
- Has separate chapters on Indian Contract Act and Negotiable Instruments Act, with up-to-date amendments and ordinances.
- Legal postulates presented in an easy-to-understand manner, avoiding unnecessary jargon.
- Cites milestone case laws for every important topic.

Contents:

Features of the Company Bill, 2013/ Company: Origin, Meaning, Features, and Nature/ Memorandum of Association & Article of Association/ Company Meetings and Proceedings/ Prospectus/ Directors/ Accounts and Audit/ Prevention and Oppression and Management/ Share Capital and Debentures/ Winding Up/ Corporate Social Responsibility (CSR)/ Company Secretary: The Indian Contract Act, 1872, Negotiable Instruments Act, 1881/ Appendix/ Index

Audience – B.Com/MBA/LLB students and Law Professionals and Managers in Organizations.

Enhancing Global Competitiveness Advantage India



A.N. Sarkar

ISBN: 978-93-80026-46-6/Year 2009
Size 16 cm × 24 cm/Pages 424
Hardback/₹ 795.00

This book has been so conceived and structured that it has followed a certain natural corollary and logical framework in comparing Indian economy with the Asian and the global economy in respect to the sectors wherein India is perceived to play a leadership role-both in the regional and the global context. Secondly, an attempt has also been made to identify areas, where, India, despite possessing a huge potential, could not so far convincingly demonstrate its competitive advantage to compete

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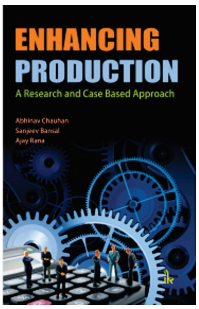
globally. Thirdly, competitive advantages in certain chosen fields, wherein India can excel and outperform its competitors are elaborated and highlighted with broad indication of the future strategy.

Contents:

Introduction/Global Economy and Global Competitiveness/Global Competitiveness in Regional & National Context/Global Competitiveness-Advantage India/Indian Economic, Industrial and Foreign Trade Policies Fostering Global Competitiveness/Sectoral Investment Opportunities in India for Achieving Global Competitiveness/Index.

Audience – Economics and Financial Management Students.

Enhancing Production: A Research and Case Based Approach



Abhinav Chauhan
Sanjeev Bansal
Ajay Rana

ISBN: 978-93-84588-33-5/Year 2015
Size 14 cm × 21.5 cm/Pages 138
Hardback/₹ 465.00

"The book most successfully tackles the versatile area of production engineering, system engineering, software engineering and integrated product and process development. Statistical product control for software empirical analysis of massive maintenance process, modern statistical control and improvements, the ways and means to improve performance, new patterns of management, the human side of enterprise, trouble shooting and solutions of occurring problems in production processes and the most analytical and strategic way of product development have been expressed in most pragmatic way on the basis of own experiences. The methods and ways to reduce the product cost and to make the production with high quality standards, based on own experiences have been depicted in a way that everyone can learn from that."

— **Dr Ashok K Chauhan**, Founder President, Ritnand Balved Education Foundation (RBEF)

This book is an outcome of a deep dive taken by the authors into the Indian plastic industry, to explore and find the levers for enhancing industrial production. A real-life case on an Indian enterprise (Kunstocom India Ltd.) has been taken as a case on which the study was based. Statistical Process Control, Organizational Culture, and Entrepreneurship and Innovation are the main pillars of the book. The book looks at almost all important aspects/variables of enhancing production, namely, quality-price-ratio, value of the product, customer satisfaction, getting into the root of every aspects of production, employee engagement, and so on. Various well-known theories in the area of production/operations have been discussed in various contextual settings.

This book will be an immensely useful resource for industry professionals, especially those who manage production and who are in constant pursuit of improving their processes and outcomes. Although the book is anchored on the Indian plastic industry, the subject matter is universally applicable, in any industrial production setting. Students of production and industrial engineering and management will find the book motivational and horizon-broadening.

Contents:

Introduction/Approaches to Production: An Assessment/Research Design for Model Framework/Impact of Statistical Process Control/Impact of Organizational Culture/Entrepreneurship and Innovation/Manufacturing to Success through Continuous Learning: The Kunstocom Case Study/Appendix/Bibliography

Audience – Industry professionals in manufacturing, plastic industry.

Export Challenges and Strategies in Indian Industry



Editors

S. Shanmugasundaram
N. Panchanatham

ISBN: 978-93-81141-93-9/Year 2012
Size 18 cm × 24 cm/Pages 256
Hardback/₹ 795.00

Entering an export business requires careful planning, management commitment, knowledge on capital and market know-how, competitive pricing strategy and access to quality products.

Export Challenges and Strategies in Indian Industry covers a wide range of topics relating to export business in India, viz., production challenges, procurement challenges, technological challenges, cost challenges, supply chain challenges, HR challenges, financial challenges, quality challenges, research and development challenges, international pricing challenges, infrastructure challenges, government policy challenges, international packing and marketing challenges, export shipping challenges, export marketing, WTO related issues, trade and non-trade barriers, market survey, India's export potential, export competitiveness, market-related issues, policy issues, issues from Indian standard, issues relating to foreign direct investment, labour issues, and so on.

This volume is an attempt to augment the existing resources on export business.

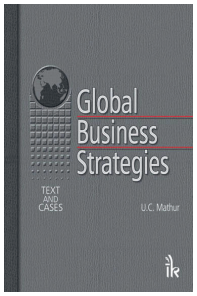
Contents:

Indian Agricultural Exports: Constraints for External Trade/Resilience Strategies for Manpower Issues in the Special Economic Zone/Ayurvedic Medicine in Indian Souk Echelon and Overseas Countries/Role of Tourism in India's Foreign Exchange Earnings: A Micro Study/The Factors Affecting Export Performance of Tea Industry/A Study of Continuous Evolution in Computing System/International Business: Challenges and Opportunities/Indian Export Trends, Issues and Challenges in Aloe Vera Leaves/Challenges and Strategies for Indian Medical Tourism Industry/Exploring Different Dimensions of Recession in Indian Scenario/An Analytical Study of Foreign Direct Investment in Retail Sector/Worldwide Competitiveness of the Dyeing and Printing Industry of Jetpur/Lack of Strategic Export Orientation and Internationalization Barriers of Indian Industries with Special Reference to SMEs in India/Challenges of Indian Agricultural Exports/Opportunities and Challenges of Supply Chain Management/A Study on Performance, Challenges and Opportunities of Indian IT/ITES Industries Export/Strategic Export Orientation and Internationalization Barriers: Evidence from SMEs in a Developing Economy/Telemedicine's Potential Challenges and Future Diagnosis Renovate of Rural Health in India/Footwear Cluster Facing the New Competition and Challenges in Agra/Export of Hair: A Golden Opportunity to India/An Empirical Study on Competitive Positioning in International Logistics using Neural Networks: Chennai Port/The Current Scenario in Export of Indian Agriculture/The Distressing Issues in Performances of Clearing and Forwarding Agents in Chennai/Evaluation of Electronics and IT Exports in India/The Evaluation of Import and Export Performance in Cargo with Reference to Chennai Port Trust/Product Life Cycle to Determine Market in International Business / Index.

Audience – Export and Business Management.

Global Business Strategies

Text and Cases



U.C. Mathur

ISBN: 978-93-80578-65-1/Year 2011
Size 18 cm × 24 cm/Pages 344
Paperback/₹ 425.00

Most countries have by now opted for market economy where, money and product sales are dependent on only demand and supply paradigm rather than any extraneous factors like politics

and government of different countries. The assertion, however needs clarification as even the most robust economies like that of US (Despite the recent meltdown of their economy) and the EU have been faulting to a large degree as they keep unwarrantedly supporting their local businesses, thus flaunting the tenets of free or market economy. The WTO has been trying its best to correct the situation along with other UN bodies. The book takes the readers on hands, on mission of exploring the different aspects of global business scenario, possible India's role in gaining their rightful share in the global market with the required methods, tools available to the present day international business person. With wide coverage of the subject, having real life, class tested case studies, the book offers a unique blend of learning the subject so vital to the country's economy with comparative ease and the needed depth for masters programmes and would help even doctoral students.

The book covers areas like outsourcing; setting up international businesses, manufacturing units and international trade has found the pride of place in the book. Trade barriers, both tariff and non-tariff, international market segmentation, customer communication, including personal communication, advertising, sales promotion, publicity and Public Relation have been dealt with from global viewpoint.

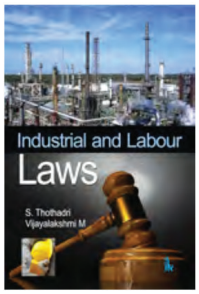
The book includes strategic information on certain selected countries, how to enter their markets, the cultural situation that would help global business players to avoid from making avoidable blunders. The book deals with the cultural aspects of global business in some detail. The book is therefore comprehensive on the subject, uses lucid style for easy reading for global student community and other global stakeholders.

Contents:

Preface/Method for handling Case Studies/Global Business/Strategies-an Introduction/Global Marketing/Global Business Environment Country Evaluation/Global Planning and Policies/Multination Companies/Global Trading Strategies/Strategies for Exports and Import/Global Human Relations Management/Global Financial Plans/Global Business and the Governments/Global Investments/Global Outsourcing–Collaborations and Controls/Global Buyers/Global Operations/Points to ponder and discuss in International Business/Countries of the Globe/Include 17 case studies/Index.

Audience – MBA and BBA.

Industrial and Labour Laws



S. Thothadri • M. Vijayalakshmi

ISBN: 978-93-85909-85-6/Year 2017
Size 16 cm × 24 cm/Pages 532
Paperback/₹ 625.00

Spread into 21 chapters, the book present the Industrial and Labour Laws in a simple and lucid manner.

Part I : Laws relating to working hours, conditions of service and employment.

Part II : Laws relating to wages.

Part III : Laws relating to industrial relations.

Part IV : Laws relating to equality and empowerment.

Part V : Laws relating to social security.

Part VI : Laws relating to employment and training.

Part VII : Miscellaneous laws relating to Employers Liability Act and labour laws exemption from furnishing returns.

Part VIII : General laws relating to the Constitution of India

With this coverage and approach, the book will be extremely useful to the students of Commerce, Business Studies and Management Degree courses at undergraduate and postgraduate levels, as well as practicing professionals and advocates.

Salient Features

- Lucid language and avoids legal jargon to make the content easily understandable.
- Definitions, sections/sub-sections and schedules appropriately provided.
- Latest amendments to all the Acts Incorporates.
- Flowcharts and diagrams as a supplementation to the text.
- Exercises at the end of every chapter.

Contents:

PART – I - Laws relating to Working Hours, Conditions of Service and Employment

1. Factories Act, 1948
2. Contract Labour (Regulation and Abolition) Act, 1970
3. Sales Promotion Employees (Conditions of Service) Act, 1976

PART – II - Laws relating to Wages

4. Payment of Wages Act, 1936
5. Minimum Wages Act, 1948
6. Payment of Bonus Act, 1965

PART – III – Laws Relating to Industrial Relations

7. Trade Unions Act, 1926
8. Industrial Disputes Act, 1947
9. Industrial Employment (Standing Orders) Act, 1946

PART – IV – Laws Relating to Equality and Empowerment

10. Equal Remuneration Act, 1976
11. Maternity Benefit Act, 1961

PART – V - Laws Relating to Social Security

12. Employees Compensation Act, 1923
13. Employees State Insurance Act, 1948
14. Employees Provident Funds and Miscellaneous Provisions Act, 1952
15. Payment of Gratuity Act, 1972

PART – VI – Laws Relating to Employment and Training

16. Apprentices Act, 1961
17. Weekly Holidays Act, 1942
18. Employment Exchanges (Compulsory Notification of Vacancies) Act 1959

Part – VII - Miscellaneous Laws

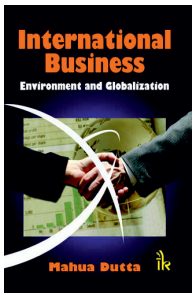
19. Employers Liability Act, 1938
20. The Labour Laws (Exemption from Furnishing Returns and Maintaining Registers by Certain Establishments) Act, 1988

Part VIII – General Laws

21. Constitution of India

Audience – B.Com/M.Com/MBA/PM/IR students. HR/PM professionals. Advocates

International Business Environment and Globalization



Mahua Dutta

ISBN: 978-93-81141-12-0/Year 2011
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 405.00

Globalization has been a major factor behind the improvement of the market changes all over the world. In today's scenario, it is not possible for business to avoid the influence of internationalization of each countrys' economy, the globalization of the world's markets, and the growth of new emerging markets. Hence, it has become very important to not only emphasize on international business but also study the affect of globalization in international business.

The main features of the book are:

- Global perspective on long term change in the world economy.
- Interaction between countries, regulatory systems and business firms.
- Rapid growth of regional free trade blocks.
- Trend towards the acceptance of free market system among developing countries.

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- Dynamics of international trade and investment.
- Role of multilateral regulatory bodies in the globalized world.
- Global environment affecting the process of globalization.
- Examples and cases are more from Asia.
- A chapter on technological environment.
- Managing intellectual property as a chapter.
- Importance of environment and sustainability.
- Role of global financial institutions.

Contents:

Unit I: Introduction in International Business/International Business and Globalization/Modes of International Business/Trade and International Trade Theories

Unit II: International Business Environment/Economic Foundation of International Business/Political and Legal Environment/ Sociocultural and Ethical Environment/Technology and Environmental Sustainability/Economic Integration and Regional Trade Blocks

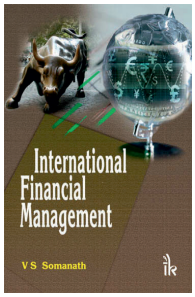
Unit III: Regulatory of International TradevInternational Financial Institutions/Foreign Exchange Market/World Trade Organization/ Trade Related Intellectual Property Rights

Unit IV: Strategic Management and International Business/Global Market Entry and Collaborative Strategies/Export and Import Strategies/Organization of International Business/Strategies for International Business Negotiation and Diplomacy

Unit V: International Business Operation/Global Manufacturing and Supply Chain Management/International Marketing/Global Human Resource Management/Financial Management in the International Business/Appendix/Syllabus/Index

Audience – M.Com, MBA, PGDM, BBA, B.Com

International Financial Management



V.S. Somanath

ISBN: 978-93-81141-07-6/Year 2011
Size 18 cm × 24 cm/Pages 844
Paperback/₹ 675.00

This book covers the broad spectrum of the theory and practice of International Financial Management. The dominant approach to the development of India since opening up of its economy in the beginning of nineties has been the increasing acceptance of its policies of economic liberalisation and focussed efforts of internationalisation of its businesses. Technology has contributed significantly to the growth and spread of globalization and expansion of international trade and commerce. Economies across the world have opened up and owing to the technological advancements in communication, transportation, and international finance; there are fewer complexities in conducting business across national borders. Further, the rapid strides and innovations in the technological infrastructure have facilitated carrying out international business anywhere at any time on a 24 x 7 basis. Managers in multinational corporations need to be empowered to experience the challenges of international finance. Managers should understand why MNCs and international financial markets behave the way they do. An international finance manager must determine the overall structure of the trade and commerce and has the task of opening businesses in a radically different ecosystem. Hence, the need for qualified and trained personnel to manage international finance is getting growing acceptance worldwide.

International financial managers need to understand the various financial tools such as derivatives, hedging, currency futures and options, exposure netting, price adjustments, balance sheet neutralizing and swaps, the need for exchange rate forecasts, management of forex exposure and how fluctuations in currency value can change the paradigm of international business transactions.

At the end of every chapter, project works and case studies have been included to enable the reader to obtain a deeper understanding of the subject. This book has been written for the postgraduate and doctoral students of business management, commerce, finance and chartered accountants. It will also be useful to the community of teachers, financial executives and also for policy makers in the fiscal and monetary areas.

Contents:

Part I: INTERNATIONAL FINANCE AND FOREIGN EXCHANGE MARKETS

International Financial Management: An Overview / International Monetary System / International Monetary Fund and International Liquidity / International Flow of Funds / Foreign Exchange Market / Forex Rate Mechanism / IRP and International Arbitrage / Derivatives / Currency Futures Market / Currency Options Market

Part II: MANAGEMENT OF FOREIGN EXCHANGE EXPOSURE

Forecasting Exchange Rates / Measurement of Foreign Exchange Exposure / Management of Foreign Exchange Exposure

Part III: MANAGEMENT OF INTERNATIONAL INVESTMENT DECISIONS

Foreign Direct Investment / International Capital Budgeting / Multinational Cost of Capital and Capital Structure / Country Risk Analysis

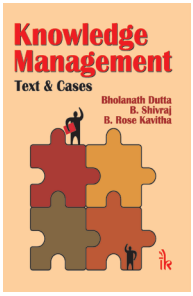
Part IV: INTERNATIONAL FINANCING DECISIONS

Financial Swaps Interest Rate, Currency and Equity Swaps / International Taxation / International Banking / International Flow of Funds / International Financial Instruments / Management of Current Assets by International Firms / Glossary / Index

Audience – Students of Business Management, Commerce, Finance and Chartered Accountants

Knowledgement Management

Text & Cases



Bhola Nath Dutta
• B. Shivraj • B. Rose Kavitha

ISBN: 978-93-81141-78-6/Year 2012
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 385.00

Knowledge Management is a hot topic nowadays in both the industry world and information research world. In our daily life, we deal with huge amount of data and information. Data and information is not knowledge until we know how to dig the value out of it. This is the reason we need knowledge management.

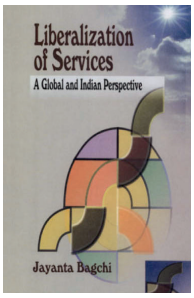
Because of this ever growing importance of managing knowledge, knowledge management as a subject has got a place in management education, technical education and even people from corporate exploring this complex area. The book presents knowledge management from historical, economical, technical and cultural perspectives and develops a working vocabulary in the field. The book has been designed and developed to meet the demand of management students and corporate executives.

Contents:

Introduction to Knowledge Manage-ment/Knowledge Organization/ Knowledge Worker/Knowledge Management System Life Cycle (KMSLC)/ Knowledge Creation and Knowledge Architecture/Codification/ Knowledge Capturing Techniques/Capturing Tacit Knowledge/Global Dimension to Knowledge Management/Environment Scanning and KM/ Technology & Knowledge Management/Knowledge Mapping – A Strategic Entry Point to KM / Futuristic Knowledge Management/Knowledge Audit and Analysis/Index

Audience – BBA & MBA students.

Liberalization of Services
A Global and Indian Perspective



Jayanta Bagchi

ISBN: 978-81-88237-26-5/Year 2005
Size 14 cm × 22 cm/Pages 320
Hardback/₹ 695.00

The service sector is one of the fastest growing sectors in India. This sector has registered rapid growth in the last decade and has been recognized for the first time in the Uruguay Round and in GATS 2000 negotiation as an independent sector. The government has also been supporting it tremendously. The sector has immense potential for growth. In the present book its various aspects have been examined in detail.

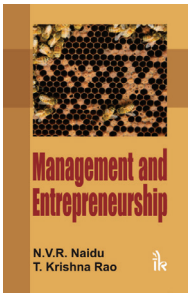
Contents:

Introduction/International Agreement of Services—GATS/The Indian Situation/Sectoral Issues/International Services: Impact on Economy Growth/Regional Agreements and Implications/ Movement of Natural Persons and Trade in Services/Linkages between Services and Foreign Suppliers/Regulation in Services/ Barriers to Trade in Services/Productivity and its Linkage with International Services/ The Private Sector's View on Trade Liberalization in the Service Sector/Conclusion and Future Perspective/Appendix/Bibliography/ References/Index.

Audience – Students, Professionals and Policy Makers.

Management and Entrepreneurship

N.V.R. Naidu • T. Krishna Rao

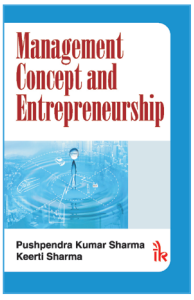


ISBN: 978-81-906757-8-9/Year 2008
Size 16 cm × 24 cm/Pages 292
Paperback/₹ 345.00

(See on page 261)

Management Concept and Entrepreneurship

Pushpendra Kumar Sharma
Keerti Sharma

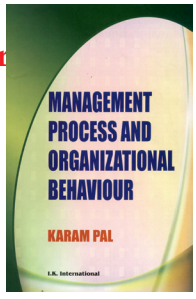


ISBN: 978-93-82332-01-5/Year 2012
Size 16 cm × 22 cm/Pages 184
Hardback/₹ 315.00

(See on page 261)

Management Process and Organizational Behaviour

Karam Pal

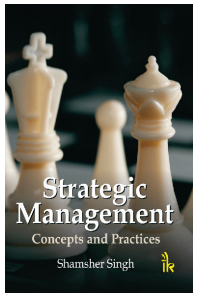


ISBN: 978-81-89866-04-4/Year 2008
Size 16 cm × 24 cm/Pages 640
Paperback/₹ 525.00

(See on page 268)

Strategic Management
Concepts and Practices

Shamsher Singh



ISBN: 978-93-82332-69-5/Year 2014
Size 18 cm × 24 cm/Pages 512
Paperback/₹ 575.00

The objective of this book is to develop an understanding of the Strategic Management process in a dynamic and competitive global environment so that students are able to perform in the changing business environment. Strategic management is the process of understanding the role and functions of the top management, how it plans and implements various strategies.

Strategic management is an ongoing process that evaluates and controls the business and the industry in which the company is involved; assesses its competitors and sets goals and strategies to meet all the existing and potential competitors; and then reassesses each strategy regularly to determine how it has been implemented and whether it has succeeded or needs replacement by a new strategy to meet changed circumstances, new technology, new competitors, a new economic environment, or a new social, financial, or political environment.

This book will help in understanding how the strategic management has evolved over a period of time, what strategies have been adopted by the different organizations around the world during the last and present century and what lessons students can learn from the approaches adopted by the different strategists and the organizations. The main objective of this book is to present the strategic management concepts, issues and processes in a simplified, logical and sequential manner so that a large number of student fraternity at graduate and postgraduate level are benefited.

Salient Features:

- Discusses new paradigms of managing challenges in corporate enterprises.
- Includes a separate chapter on "Strategies of Mergers and Acquisitions."
- Highlights strategy execution and implementation factors.
- Emphasizes organizational culture and its relevance in organizational effectiveness.
- Usage of the ideas of prominent scholars in the field
- In each chapter, an opening case to put the concepts in perspective
- "Strategic Focus" to give a live example, in some detail, of a company or situation
- "Strategy Right Now" in each chapter to highlight companies that are effectively using a strategic management concept

Contents:

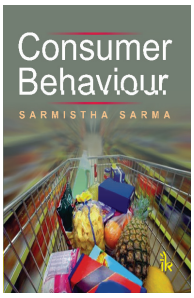
Introduction of strategic management/Strategic management process/ Establishment of hierarchy of strategic intent/External environment analysis/Organisational appraisal/Corpoate level strategy-stablility and retrenchment/Corporate level strategu - growth or expansion/ Business level strategies/Strategy analysis and choice/Strategy implementation/Strategy implementation-structures design and change/Behavioural implementation/Functional implementation plans and policies/Strategic evaluation and control

Audience – B.B.A. and M.B.A. students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Consumer Behaviour



Sarmistha Sharma

ISBN: 978-93-84588-05-2/Year 2014
Size 18 cm × 24 cm/Pages 436
Paperback/₹ 595.00

Consumer Behaviour as an academic discipline is a culmination of a number of subjects, namely, economics, marketing, anthropology, sociology and psychology. Globally, there are a number of researches carried out on consumer behaviour. The growing significance of consumer behaviour has been well accepted in the academic fraternity and the subject is taught in the postgraduate programmes of Master of Business Administration in various universities. The present book has been designed by keeping in mind all the topics incorporated in the consumer behaviour in various universities.

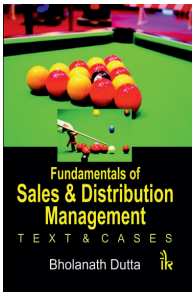
The book provides various marketing insights from contemporary business world. The keywords, cases and the exercises at the end of each chapter will be helpful for the students.

Contents:

Introduction to consumer behaviour/Consumer research/Market segmentation/Consumer motivation/Personality and consumer behaviour/Consumer perception/Consumer learning/Attitude/Group influence and communication process/Social class/Culture and family /Consumer influence and diffusion of innovation/Models of consumer behvaiour/Index

Audience – MBA & BBA students.

Fundamentals of **Sales and Distribution Management** *Text and Cases*



Bholanath Dutta

ISBN: 978-93-80578-91-0/Year 2011
Size 18 cm × 24 cm/Pages 304
Paperback/₹ 385.00

This book discusses the basic and fundamental concepts of Sales and Distribution Management in a very simple and lucid manner to create better understanding on the subject. This book also includes a detail insight on chain management and retail management. It covers the MBA syllabus of of all major universities.

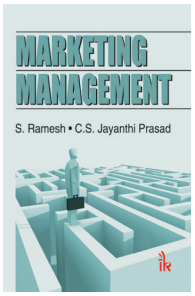
This book provides a comprehensive coverage of various conceptual aspects concerned with sales and distribution management. This book will definitely be of great help for the students to grasp the fundamental concepts of sales and distribution management and further implementation of those.

Contents:

Introduction and Basic Concepts/Organizing and Executing the Sales/Sales Force Management/Overview of Distribution Management/Managing Marketing Intermediaries/Retail Management/Logistics Information System and International Logistics/Warehouse Management/Case Studies/Index

Audience – B.Com & BBM.

Marketing Management



S. Ramesh • C.S. Jayanthi Prasad

ISBN: 978-93-81141-86-1/Year 2012
Size 16 cm × 24 cm/Pages 778
Paperback/₹ 495.00

This book applies marketing thinking to the complete spectrum of marketing: core concept & importance, consumer and business markets, theories of retail, communication process, successful approaches to CRM, patterns of market segmentation, and global marketing.

This book focuses on the practical applications of marketing techniques and the management of a firm's marketing resources and activities. It presents a framework for analyzing buyer behaviour and managing personal communication. The core objective of this book is to provide clear views on Marketing Management. It includes marketing mix and basics of marketing as its main part. It contains examples well as case studies, self assignments which make it suitable for undergraduate as well as for postgraduate level streams.

The book broadly discusses:

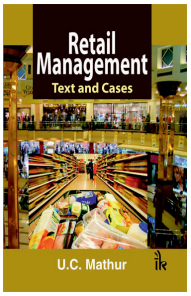
- Marketing and its Environment
- Green Marketing
- Marketing Research and Buyer Behaviour
- Market Segmentation and Marketing Mix
- Product Management
- Pricing Strategies
- Distribution and Public Policy
- Marketing Communication and Promotional Strategies
- Marketing of Services
- Managing Personal Communication
- Rural Marketing
- Rural Consumer Behaviour
- Word-of-Mouth(WOM) Communication
- International & Global Marketing Management
- Product Life Cycle

It also contains:

- 60 self assignments for practice
- 75 case studies
- Exhaustive bibliography

Audience – Students of BBA and M.Com, MBA (Mktg).

Retail Management *Text and Cases*



U.C. Mathur

ISBN: 978-93-80578-66-8/Year 2011
Size 18 cm × 24 cm/Pages 496
Paperback/₹ 465.00

The decade starting 2009 can be defined to be that of Retail in India. Starting with the neighbourhood grocer shops to giant malls with multiplex cinema halls, shops for virtually every customer, including choices for eateries, provide veritable shopping experience, and have become great places for enjoyable outings with

friends. The shops of today are ready to cater to different types of customers and it is said that a shop is as good as its inventory and that signifies its buying plans. These pose strategic issues for the entrepreneurs as well as for retail management regarding the primacy of different approaches in retail trade. The book is fulfilling the need for an all-encompassing book on retail.

From the days of trudging to the grocers, retailing has come a long way to providing a memorable experience that becomes uniquely different on each visit. The choice of shops, brands on the malls add to the buying pleasure. Therefore, like in the west, Indian shoppers are looking forward to and are getting the treatment they deserve on their shopping sprees. The business houses of note in India have therefore joined the retail bandwagon with great gusto, hoping to reap the bounty available for the asking. However, not all retailventures become successful due to a variety of reasons. The major dilemma for retail entrepreneurs is the secret formula for continued success. The book provides the entire gamut of carefully crafted Success themes that covers the retail business in its entirety. Competition, both Indian and international gives the benefit of large product range, brands and competitive prices to the buyers, besides adding misery to the less organised retail outlets.

Retail management can be likened to the comprehensive management of a luxury liner that calls for round the clock operations between the docks when the ship refurbishes its stocks, staff and generally ensures that no tangible obstacle creeps in its next journey segment. In retail operations too, starting from vendor selection, selection of the retailer, the business gets its full impact when the customer gets the product/brand he wants, where he wants and when he wants. These are the virtual determinants of retail success. These have been thoroughly covered in the book besides the regular retail business areas.

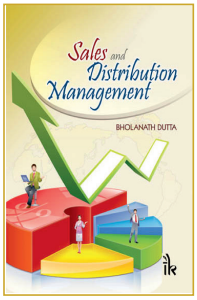
For retail entrepreneurs selection of dealers, their motivation for selling their products in preference to competitive brands have taken the pride of place in the book. Sales calls made on retailers by the principles, including call objective, call planning, call closure and feedback have been highlighted for the benefit of the readers.

Contents:

Retail Management: an Introduction/Retail Operating Plan/ Locating New Customers/Retail Brand Management/ Strategic Human Resource Management in Retail/Retail Specifics/External Business Environment/Motivating Retail – Critical Success Factors/ Merchandising and Inventory Planning for Retail/Retail Pricing Strategies/Retail Economics Worldwide and Competitive Advantage on e-Retailing/Purchase, Stores, Inventory and Logistics in Retail Management/Strategies for Retail Advertising, Promotion and PR/ Marketing Research/Consumer Behaviour and Market Segmentation/ Comprehensive Retail Strategy/Include 16 case studies/Index.

Audience – Marketing Management.

Sales and Distribution Management



Bholanath Dutta

ISBN: 978-93-80578-79-8/Year 2011
Size 18 cm × 24 cm/Pages 192
Paperback/₹ 315.00

This book discusses the basic and fundamental concepts of Sales and Distribution Management in a simple and lucid manner to create better understanding of the subject. It covers BBM/B. Com courses.

This book provides a comprehensive coverage of various conceptual aspects of Sales and Distribution Management.

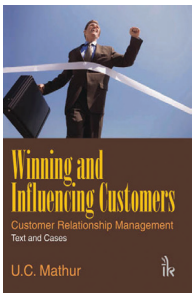
This book will definitely be of great help for the students to grasp the fundamental concepts of sales and distribution management and further implementation of these.

Contents:

Introduction and basic concepts/Organising and Executing the Sales Effort/Sales Force Management/Overview of Distribution Management/Managing Marketing Intermediaries/Index.

Audience – B.Com & BBM.

Winning and Influencing Customers
Text and Cases



U.C. Mathur

ISBN: 978-93-80578-95-8/Year 2011
Size 18 cm × 24 cm/Pages 336
Paperback/₹ 355.00

Most corporate CEOs in their hearts would be thanking their competitors, as it is the competition that brings about the best in companies. Market share of companies are by far the most prized asset of any company. To keep market share on ever increasing path in the face of tough competition requires continuous uncompromising onslaught on the psyche of the customers, prospective customers of brand fitness to their needs and the top of the mind recall. The customer relationship management (CRM), which forms the bedrock of the book has been in existence for centuries and yet with severe and chaotic at times, unprincipled competition CRM has become the focus of marketers around the world and it has taken the cecntre stage in the marketing of most companies. Even the monopoly companies have realized the importance of CRM as they could land up in severe competitive arena if they did not hold their customers firmly by hand with no chance of letting it go. Increase in market share comes mainly by, taking business from competition, selling more to existing buyers, persuading non-buyers to start buying their brand and expanding their geographic coverage of sales. These must include "Customer interaction" and efforts of winning them over. The book covers in great detail these areas with emphasis on the different levels of customers, including the first level customers the Distribution Channel members.

The area of customer communications forms a significant part of CRM and therefore, has found the pride of place in the book, including, personal communication, advertising, sales promotion, publicity and Public Relations. CRM has somehow got mixed with unethical practices that certain marketers have been using to pull the customers by unprincipled means. These have, fortunately backfired on these marketers and therefore must be eschewed and the idea has been encapsulated to highlight the pitfalls that surface in such misadventures. Well thought out and class tested selected cases that finds its place in the book, along with the systematic unfolding of the latest "state of the art" CRM practices make reading the book not only interesting for the readers but also its lucid style, puts it in the top bracket.

Contents:

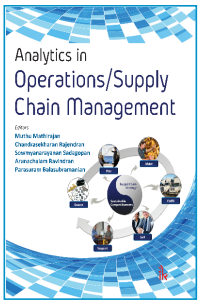
What is Business-Customer/Marketing Simplified—at a glance/ Locating New Customers/Community as a Stakeholder—prelude to CRM/Winning the Rural Customers/CRM – e CRM-Customer Communications and Advertising/Brand Value-For CRM/ Public Relations- Building CRM through Stakeholders/Customer Relationship, Value and Behaviour/Ethical Marketing, Reinforcing CRM / Understanding Case Studies

Audience – Marketing Management.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Analytics in Operations/Supply Chain Management



Editors

Muthu Mathirajan
Chandrasekharan Rajendran
Sowmyanarayanan Sadagopan
Arunachalam Ravindran
Parasuram Balasubramanian

ISBN: 978-93-84588-94-6/Year 2016
Size 18 cm × 24 cm/Pages 656
Hardback/₹ 3995.00

This proceedings presents key contemporary issues primarily in Operations/Supply Chain Management. Operations/Supply Chain Management forms the key functional area in today's competitive global environment. This edition mainly focuses on analytics for efficiency and effectiveness in Operations /Supply Chain Management. A broad gamut of how descriptive, predictive, and prescriptive analytics are used in Operations/Supply Chain Management for achieving efficiency and effectiveness with respect to strategic, tactical and operational issues, are included in this proceedings.

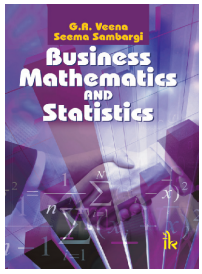
The 46 articles presented in the proceedings are from over 100 contributors from academics and industry. These 46 articles are classified into six groups, based on the main theme of the respective studies. These groups are: (1) Analytics for Operations Strategy; (2) Analytics for Performance Analysis; (3) Analytics for Resource Planning/Allocation; (4) Analytics for Sequencing and Scheduling; (5) Analytics for Product/Process Management; and (6) Supply Chain Analytics.

Contents:

Part I: Analytics for Operations Strategy
Part II: Analytics for Performance Evaluation
Part III: Analytics for Resource Planning/Allocation
Part IV: Analytics for Sequencing and Scheduling
Part V: Analytics for Product/Process Management
Part VI: Supply Chain Analytics.

Audience – Students, Practitioners and Faculty Members in the disciplines of Industrial Engineering, Operations Management and Management Science; Business Analysts; Analytics Consultants.

Business Mathematics and Statistics



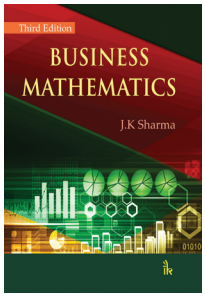
G.R. Veena • Seema Sambargi

ISBN: 978-93-82332-42-8/Year 2013
Size 18 cm × 24 cm/Pages 404
Paperback/₹ 505.00

(See on page 132)

Business Mathematics

Third Edition

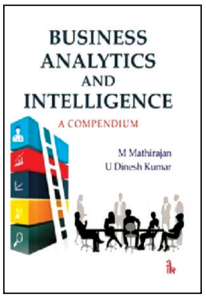


JK Sharma

ISBN: 978-93-85909-14-6/Year 2016
Size 18 cm × 24 cm/Pages 744
Paperback/₹ 695.00

(See on page 132)

Business Analytics and Intelligence: A Compendium



Muthu Mathirajan
U Dinesh Kumar

eBook

ISBN: 978-93-85909-54-2/Year 2017
Size 18 cm × 24 cm/Pages 1994
ebook

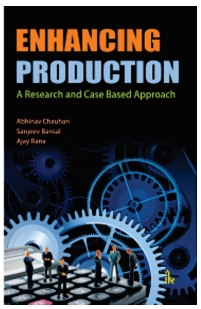
Business Analytics and Intelligence: A Compendium includes articles on advanced data analysis, business analytics, big data and business intelligence for distinguished academicians, practitioners and researchers from academia and industry. It highlights emerging concepts and potential applications in descriptive, predictive and prescriptive analytics fields. The 216 articles presented in the proceedings are from over 425 contributors from academics and industry.

Salient Features:

- Fulfills the need for supplementary to textbooks on business analytics and intelligence, particularly related to emerging concepts as well as on potential applications on business analytics and intelligence.
- Articles included address various tools applicable to Banking and Finance, Human Resource Management, Marketing, Operations and Supply Chain Management, Public Policy, Fraud Analysis, Patent Analysis, Sentiment Analysis, etc.
- Articles presented in the proceedings inform, educate and challenge students, practitioners and faculty members in the disciplines of Statistics, Operations Research, Industrial Engineering, Management Science, Data Science, Heuristic Optimization and Machine Learning.
- Analytics consultants are expected to broaden their perspective on the utility and application opportunity of emerging concepts and new applications of business analytics and intelligence.

Audience – Students, Practitioners and Researchers in the disciplines of Statistics, Operations Research, Industrial Engineering, Management Science, Data Science, Heuristic Optimization and Machine Learning.

Enhancing Production: A Research and Case Based Approach



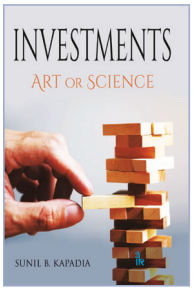
Abhinav Chauhan
Sanjeev Bansal
Ajay Rana

ISBN: 978-93-84588-33-5/Year 2015
Size 14 cm × 21.5 cm/Pages 138
Hardback/₹ 465.00

(See on page 271)

Investments

Art or Science



Sunil B. Kapadia

ISBN: 978-93-84588-29-8/Year 2018
Size 18 cm × 24 cm/Pages 546
Paperback/₹ 745.00

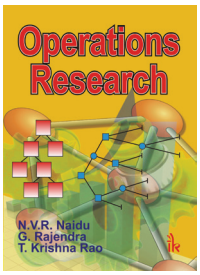
(See on page 263)

Operations Research

N.V.R. Naidu • G. Rajendra
T. Krishna Rao

ISBN: 978-93-80578-94-1/Year 2011
Size 18 cm × 24 cm/Pages 912
Paperback/₹ 675.00

(See on page 141)

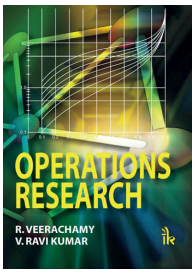


Operations Research

R.Veerachamy • V. Ravi Kumar

ISBN: 978-93-80026-40-4/Year 2010
Size 18 cm × 24 cm/Pages 1260
Paperback/₹ 525.00

(See on page 141)

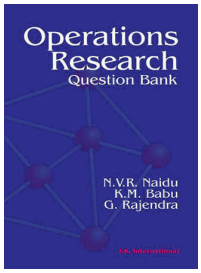


Operations Research
Question Bank

N.V.R. Naidu • K.M. Babu
G. Rajendra

ISBN: 978-81-89866-42-6/Year 2007
Size 14 cm × 21 cm/Pages 192
Paperback/₹ 295.00

(See on page 141)

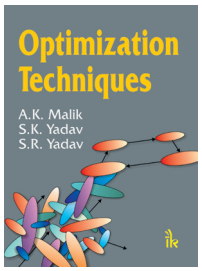


Optimization Techniques

A.K. Malik • S.K. Yadav • S.R. Yadav

ISBN: 978-93-81141-81-6/Year 2012
Size 18 cm × 24 cm/Pages 248
Paperback/₹ 405.00

(See on page 142)



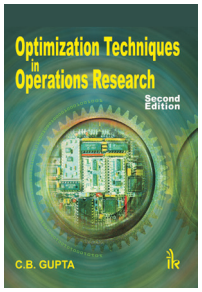
Optimization Techniques in Operation Research

Second Edition

C.B. Gupta

ISBN: 978-93-81141-67-0/Year 2012
Size 16cm × 24 cm/Pages 386
Paperback/₹ 425.00

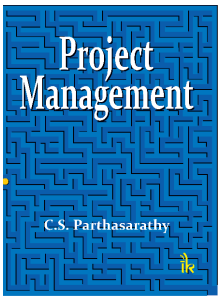
(See on page 142)



Project Management

C.S. Parthasarathy

ISBN: 978-93-82332-67-1/Year 2014
Size: 18 cm × 24 cm/Pages 464
Paperback/₹ 485.00



This book aims at supplementing current academic programmes of schools/colleges/institutes of (i) Management and (ii) Technology/Engineering and to assist in appreciating real-life practical approach in Project Management. It is hoped that educational institutions will find it a unique book for case studies in Project Management facilitating more effective and close co-ordination of efforts, particularly in respect of inter-related programmes/projects. The book will be equally usefull for the use of, and application by, professionals, practitioners, etc.

The book is predominantly practical-oriented with minimum essential academic/theoretical inputs. Particular mention may be made to a number of case studies cutting across different sectors of the economy such as iron ore export programme, power, water resources, health, agriculture, etc. The book is flooded with innumerable illustrations, tables, comprehensive drawings, etc.

Contents:

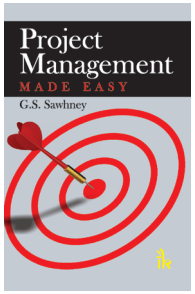
Project management/Project appraisal/Network planning and scheduling technique/Performance budgeting for capital projects/Resource allocation/Squared or time-based network plan/Standardisation and network technique (PERT/CPM)/Environmental impact assessment/Project risk assessment and analysis/Probability of achieving deadlines/Some aspects of management of construction contracts/Project monitoring and information system/Management by exception/Project completion report/Sweetwater hydro electric project a case study/Deep valley hydro-electric project resource-based network plan a case study/Network-based planning & control system for iron ore export programme/Application of network technique (PERT/CPM) to health programmes/Planning of power projects/Management information system for power projects/Management of maintenance/Application of network technique (PERT/CPM) to operation and maintenance/State-wide monitoring and information system for plan implementation/Project consultancy/Training in project planning, scheduling and monitoring lesson plan/Use of computers/Cases/problems/Project organisation structure/Ethics in project management/Conclusion

Audience – Management technology and engineering students

Project Management
Made Easy

G.S. Sawhney

ISBN: 978-93-81141-96-0/Year 2012
Size 16 cm × 24 cm/Pages 300
Paperback/₹ 355.00



The aim of Project Management, is to achieve successful completion of a project within time, cost and quality standards. The book is designed for undergraduate and postgraduate students of mechanical engineering, industrial engineering, production engineering and management studies. The book is in question-answer form to make the text pricise and easy to understand.

Salient Features:

- The text matter has been presented in question-answer form
- Easy to follow and designed as a self learning book
- Includes all possible type of questions in each chapter
- Coverage includes concept of project, project management, project organization, project contracts, project appraisal, cost

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

and performance analysis, planning and scheduling techniques, network cost system and crashing, resource consideration in network, computers in project management, special projects and new management concepts

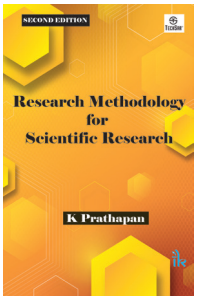
- Includes previous years solved questions of university examinations
- A quick and precise aid for preparation and revision for examination.

Contents:

Concept of Project/Project Management and Scope/Project Organization/Project Contracts/Project Appraisal/Project Cost and Performance Analysis/Planning and Scheduling Techniques/ Network Cost System and Crashing/Resource Consideration in Network/Computers in Project Management/Special Projects and New Management Concepts/Index

Audience – B.E. and B. Tech. Engineering students.

Research Methodology
For Scientific Research
Second Edition



K. Prathapan

ISBN: 978-93-90620-17-3/Year 2023
Size 16 cm × 24 cm/Pages 408
Paperback/₹ 595.00

This revised edition explains various aspects of research methodology in science. Various philosophies of science that are necessary to understand the basic principles of research, scientific method, publication of research articles, preparation of research thesis, etc. are described with all necessary details. Detailed discussion on various research and publication ethics is given. The book includes various topics in the syllabi of PhD coursework on research methodology in science and mathematics of many Universities. This book will help the reader to understand the topics in a better way. Detailed discussions, examples, and proper illustrations are provided wherever necessary.

Salient Features:

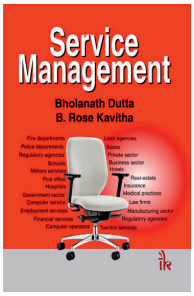
- A complete description of scientific research methodology.
- Various scientific philosophies are discussed.
- A detailed discussion of various components of a research paper.
- Various methods and aspects of research publication.
- A complete chapter is devoted to a discussion on research thesis writing.
- Separate chapters on research ethics and publication ethics.

Contents:

1. Perspectives of Scientific Research./2. Philosophy of Science./ 3. Getting Started with Research./4. Scientific Methodology/ 5. Data Collection and Analysis./6. Research in Practice./7. Scientific Writing./8. Preparation of Research Thesis./9. Ethics in Research./ 10. Publication Ethics

Audience – *Students doing M.Phil & PhD*
Shelving – Operations and Decision sciences

Service Management



Bholanath Dutta
B. Rose Kavitha

ISBN: 978-93-80578-78-1/Year 2011
Size 18 cm × 24 cm/Pages 185
Paperback/₹ 315.00

This book discusses the basic and fundamental concepts of Service Management in a very simple and lucid manner to create better understanding of the subject. It covers BBM/B. Com courses as prescribed by various universities

This book provides a comprehensive coverage of various conceptual aspects of Service Management.

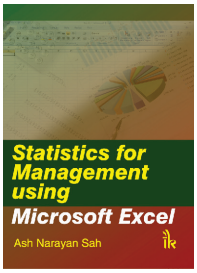
This book will definitely be of great help for the students to grasp the fundamental concepts of Service Management and further implementation of these.

Contents:

Introduction to Service Management/Tourism and Travel Services/ Banking and Insurance/Finance and Marketing Services/Healthcare and Educational Services/Index

Audience – BBM & B.Com students.

Statistics for Management Using Microsoft Excel

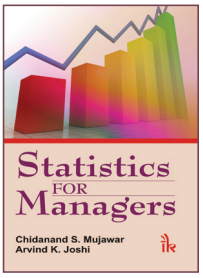


A. N. Sah

ISBN: 978-93-81141-98-4/Year 2013
Size 18 cm × 24 cm/Pages 416
Paperback/₹ 525.00

(See on page 144)

Statistics for Managers



Chidanand S. Mujawar
Arvind K. Joshi

ISBN: 978-93-81141-45-8/Year 2011
Size 18 cm × 24 cm/Pages 290
Paperback/₹ 345.00

Statistics for Managers is a comprehensive text for the students of MBA. This book provides an exhaustive understanding of statistics. Statistical language has been made easier with the help of numerous review questions and graded exercises.

The topics included are Statistics, Probability, Sampling Distribution, Testing of hypothesis and Inferences.

Salient Features:

- Each topic is treated in a systematic and logical manner.
- Variety of solved problems in each unit.
- Each unit has a separate question bank with multiple-choice problems.
- Several worked out examples are drawn from various examination papers of reputed universities.

Contents:

Introduction to Statistics/Measures of Central Tendency/Measures of Dispersion/Correlation and Regression/Time Series Analysis and Index Numbers/Probability/Sampling Theory/Testing of Hypothesis/Index

Audience – Business Management students.

Agile Manufacturing

Globalised Customized Green Products

M P Chowdiah

ISBN: 978-93-81141-58-8/Year 2012
Size 18 cm × 24 cm/Pages 300
Hardback/₹ 1295.00

(See on page 83)

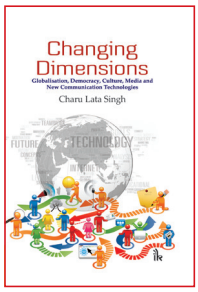


Changing Dimensions

Globalisation, Democracy, Culture, Media and New Communication Technologies

Charu Lata Singh

ISBN: 978-93-85909-97-9/Year 2017
Size 16 cm × 24 cm/Pages 208
Hardback/₹ 425.00



This book is an attempt to put light on various issues and challenges in relation to Globalisation, Democracy, Culture and Communication in wake of New Communication Technologies. Different chapters in the book try to cover different areas of study which we are witnessing in our day to day intercepts. All the chapters also present the theoretical aspects to base the arguments on logical reasoning. The chapters are then built on to explain the study following an exploratory approach. The chapters are therefore complete in their own extents and are connected to each other as well, as they are sewn together with the thread of the changing dimensions at new communication technologies. The book is divided into eight chapters. An overview on New Media, Communication and Society is presented to give an overall view on the topic.

Salient Features

- An overview on new media, communications and society is presented.
- Shows the growth and decline of globalisation on one hand and notions about democracy on the other hand in contemporary scenario, laden with wide range of issues and challenges that need to be tackled.
- Discusses the picture of emerging aspects in field of Journalism and also deals with the questions on culture and identity in the wake of new media.
- Traces the changing relationships of teenagers and parents due to the usage of Facebook and also tries to draw relationship between education and development.
- A complete scenario is painted for explanation and seeking solution in fast changing dimensions of technologically woven society.
- Draws the attention to the power of social media to communicate and revolutionize the systems to bring change.
- Explains the major issues of Trolling and cyber bullying with the issues of privacy in the absence of strict cyber laws.

Contents:

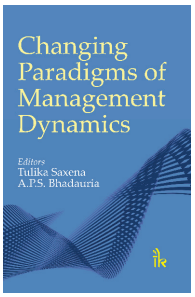
Changing contours of Globalisation and Democracy/Changing Journalism Dimensions in Post Free Press Era/New Media and Cultural Issues/Issues in Indian Media/Changing Dimensions of Public and Private Sphere/Facebook Culture/Changing Dimensions in Higher Education/Social Media and Revolutions/Trolling , Cyber Bullying and Privacy

Audience – Educational institutes, researchers, libraries and for reference purposes.

Changing Paradigms of Management Dynamics

Tulika Saxena • A.P.S. Bhadauria

ISBN: 978-93-82332-97-8/Year 2014
Size 16 cm × 24 cm/Pages 356
Hardback/₹ 995.00



Changing Paradigms of Management Dynamics includes articles, research and conceptual papers, cases from various academicians, corporate professionals, research scholars and students. The broad theme of the book is convincingly appropriate in the present scenario where organizational and individual values play a pivotal role in shaping the future.

The book is devoted to examining some key dimensions of management dynamics. It throws light on various aspects of business management like marketing, human resource management, information technology, international business, financial management, knowledge management, talent management, rural management, wealth management etc. Management theory has also moved forward, and in some cases has become well-established practice in the corporate world. The book offers this relevant view of management in a way that has a logical flow of content, succinct and clear in its writing style, rich in real-world examples, and remains focused on the role of managers.

The book will be helpful in developing, serving and sustaining business houses, management students, researchers, entire corporate fraternity, institutes, policy makers and all concerned stakeholders of effective management dynamics.

Contents:

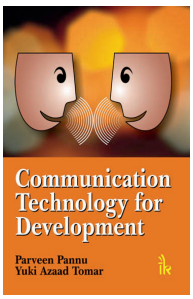
Reputational capital as an ethical questioning of technological innovation/Factors affecting impulse buying behavior in mall: a consumer study with special reference to kanpur city/A workshop study on implementation of corporate governance standard practices on small and medium India: road map to success/Job satisfaction of employees in mumbai refinery of bharat petroleum corporation limited/Fulling the indian MSMES: The engines of economic growth/A role and impact of information technology in indian banking services after liberalization–trends, issues and challenges/Managing women education in India: proposed management strategy for improvement/Cultivating ethics and human values: A case of migrants/Evolution and challenges of green marketing/Consumer references towards motorcycles purchases decision–an empirical analysis of rural lucknow/Recognising ethical issues in global business/Employee development and its effects on employee performance: a conceptual framework/Employees' provident fund scheme as a social security for employees/Microfinance – an instrument to develop rural India/Impact of incorporating transactional and transformational leadership on managerial effectiveness: an od intervention/Changing face of microfinance in India with special reference to reliance capital/A New paradigm of self-help group an empirical study on social responsibility initiatives by cemex/Leadership skills: Need of the Contemporary Era/Current scenario of management education in India/Employer Branding: need of the hour/The changing paradigm in retail sector with special reference to the new policy of FDI/New paradise in management dynamics: corporate restructuring/Changing paradigm in HR function: E-recruitment/Women awakening in present education in India/Entrepreneurship for benchmarking/Customer perception on banking services: with special reference to Indian private banks in allahabad region/The role of information technology in developing rural India/A study on buying motives and preferences of gold jewellery buyers/Film based merchandising: promotions, revenues and more/Intrinsic motivation - An analytical study in the light of jeevan vidya and its application to human resource management/New challenges for priority sector lending in India/Integrated farming system: a path for rural development/Talent management: A study at B-schools/A study on relationship between employee motivation and organizational effectiveness/Green marketing - an analysis of consumer behaviour towards green products

Audience – BBA and MBA students.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Communication Technology for Development



Parveen Pannu • Yuki Azaad Tomar

ISBN: 978-93-80578-90-3/Year 2012
Size 18 cm × 24 cm/Pages 366
Paperback/₹ 455.00

The book, so painstakingly authored vividly, encompasses all aspects of communication and their effective uses. The book no doubt would prove immensely useful to learners, planners and practitioners of mass media for socio-economic development.

—Ram Saran Joshi, Director,
Mass Media, Jaipur National University
Former pro Vice Chancellor,
Makhan Lal Chaturvedi University

This book provides a comprehensive overview on the information communication technologies. A prominent feature of the book is that it includes numerous examples in usage of ICT4D.

Asit Jolly
Asian Age

This book is a valuable addition to the body of knowledge on the link between ICTs and development. It is a must have for the students of mass communication and media practitioners!

Raveen Thukral
City Editor, The Tribune

ICT4D endeavors to provide the link between ICTs and development, drawing on studies from various parts of India where ICTs have contributed to delivering development & examples from the world global in nature.

Ashu Phakey
Dainik Bhaskar (Bhaskar Group)

The present book discusses how digital revolution can be used effectively for achieving development.

The book highlights the range of communication technologies which are used to manage information and knowledge. It includes radio, television, telephone, cinema, computers, internet, satellite and wireless technology as communication technologies. Information Communication Technologies (ICTs) can be useful tools to support existing and new development activities.

Spread over 29 chapters, the book combines the conceptual framework with practical guidance explaining the different ICTs and using the specialised knowledge for development.

The book aims to highlight the role of ICTs to empower people with skills related to media, technology, journalism and an ability to make decisions regarding convergence of ICTs, enabling them to improve their living standards and quality of life.

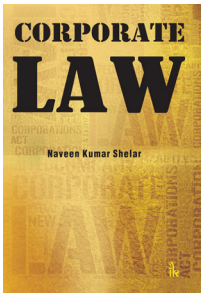
The book is meant to be extremely useful for the students of communication and extension, journalism, mass media, home science, social work, etc.

Contents:

PART I: Introduction to ICTs
1. Introduction to ICTs
PART II: Living in an Information Society
2. ICTs and Information Society
3. Accessing ICTs
4. Professional Communication and ICT
PART III: ICTs for Development
5. Development and Communication
6. ICTs for Development
7. Media Advocacy Campaign for Social Change and Development
PART IV: Internet—An ICT
8. Internet
9. Email
10. World Wide Web (www)
11. Chat, Blog and Twitter: The New Mantras of Communication
12. Internet for Development
PART V: Wireless Communication: The Future Beckons
13. Satellite and Wireless Technology
PART VI: e-newsletter: An ICT
14. e-newsletter
15. Online Journalism
PART VII: Radio: An ICT
16. Radio: Overview and Programming
17. Community, Internet and Satellite Radios as ICTs
PART VIII: Using Photography and Video as an ICT
18. Using Still Images in Development
19. Using Moving Images for Development
PART IX: Television: An ICT
20. Television Overview and Programming
21. Crucial Role of Television in Development
PART X: Cinema
22. Cinema for Social Change
23. Cinema for Appreciation
PART XI: Mobile Telephony: Revolutionizing Communication Scenario
24. Know the Mobile Telephone
25. Mobile Phones: Changing the Communi-cation Landscape
26. 3Gs and other Mobile Communication Standards
PART XII: Convergence of ICTs
27. Convergence in Information Communication Technologies: An Emerging Phenomenon
28. India's Communication Landscape
PART XIII: Critique of Using ICTs for Development
29. Critique of Using ICTs for Development
Index

Audience – Students of Journalism, Mass Media, Home Science, Social Work.

Corporate Law

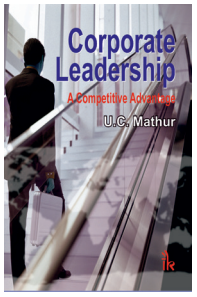


Naveen Kumar Shelar

ISBN: 978-93-85909-02-3/Year 2016
Size 18 cm × 24 cm/Pages 368
Paperback/₹ 455.00

(See on page 270)

Corporate Leadership
A Competitive Advantage



U.C. Mathur

ISBN: 978-93-81141-60-1/Year 2012
Size 18 cm × 24 cm/Pages 200
Paperback/₹ 325.00

Leaders have the power to take their organizations to great heights. The corporate leaders, therefore, need to acquire and continuously upgrade their skills, knowledge base and foresight for building and motivating their teams and creating an atmosphere for success. The book deals extensively with the entire gamut of corporate experience and various disciplines with leadership roles clearly delineated therein. Human angles include the soft-skills leaders need to develop, the ethical code and the moral value systems that make leaders successful are discussed at length in the book.

The book takes the students into the corporate leadership psyche as it extends to team building exercises, solving ethical issues as it also deliberates on the difficulties faced by the leaders while bringing in changes in the organisational streams, like corporate structure, culture, plans and policies, besides its vision, mission, goals and objectives. The book offers practical solutions for handling these problems.

The book covers all the strategic areas taught in the MBA and PGDM programmes with case studies.

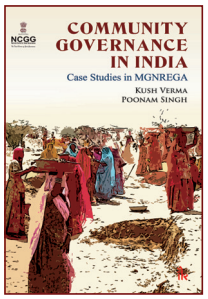
Contents:

Corporate Leadership Challenge / Strategic Action / Role of the Leader in Strategic Change / Inspirational Leadership / Leadership Leverages / CEO-Integrated Responsibility / The Leadership Qualities / CEO's Behaviour / Soft Skills Essential for Leaders / Solving Ethical Problems / Leaders Enhance Brand Equity / Case Studies / Index

Audience – Business management students and professionals in corporates sectors.

Community Governance in India

Case Studies in MGNREGA



Kush Verma • Poonam Singh

ISBN: 978-93-85909-01-6/Year 2016
Size 22.5 cm × 14.5 cm/Pages 432
Hardback/₹ 1295.00

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) aims at enhancing the livelihood security of people in rural areas by guaranteeing 100 days of wage payment in a financial year to those rural households whose adult members volunteer to do unskilled manual work. A vast majority of these individuals are marginal farmers and landless labourers whose incomes are insufficient to support their family. For long, they have been dependent on casual wage works involving migration – seasonal or on a long-term basis. Keeping such section of the population in mind, the MGNREGA was launched in 2006. The Act seeks to create durable assets and strengthen the livelihood resource base of the rural poor. The single major difference between the previous welfare schemes and MGNREGA is that all the previous schemes and programmes were allocation based while MGNREGA is a demand-based programme.

The choice of works suggested in the Act addresses causes of chronic poverty, like drought, deforestation, soil erosion, and so on, so that the process of employment generation is carried out on a sustainable basis. There are numerous examples of such exemplary works being undertaken as a part of this scheme. This volume of case studies is the culmination of an intensive documentation exercise done by a very talented pool of researchers. These case studies have been picked up from various states including Andhra Pradesh, Bihar, Jharkhand, Karnataka, Maharashtra, Rajasthan, Sikkim, Uttarakhand, Uttar Pradesh and West Bengal and serve as representative specimens of how the benefits of the scheme have been leveraged to improvise upon the natural resources and public goods.

Salient Features

- These case studies highlight the importance and significance of good governance in rural perspective.
- The in-depth studies cover a wide range of activities from identification and capturing of onsite work snapshots for creation of durable and productive assets to preparation of labour budget in Gram Sabha with the help of Information and Communication Technology.
- It has brought out some best practices adopted for perfect planning and implementation.
- Different studies have elaborated on the effectiveness of MGNREGA and Rashtriya Swastha Bima Yojana (RSBY) and sanitation schemes.

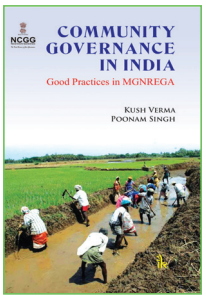
Contents:

MIS for Tracking of Workers, Works and Funds in Sikkim/ Role of MGNREGA in Disaster Mitigation in Uttarakhand/ Convergence of MGNREGA with Rural Sanitation in Rajasthan/ Impact of MGNREGA on the Migration of Workforce: East Singhbhum, Jharkhand/ Labour Budget – Preparation of Plan: Andhra Pradesh/ Public – Private – PRI – Community Partnership for Sustainable Development – Gulbarga, Karnataka/ NREGS V/S MGNREGA: Maharashtra/ Social Audit and Community Empowerment in West Bengal/ Social Security Schemes: Rashtriya Swasthya Bima Yojana [RSBY] & MGNREGA, Madhya Pradesh/ Electronic Fund Management System (e-FMS), Chhattisgarh/ MGNREGA Wage Rate V/S Market Rate in Haryana/ Shortage of Agriculture Labour: Hoshiarpur, Punjab/ Non Availability of Unskilled Labour in Industry: Gujarat/ Ombudsman: An Effective Tool in MGNREGA: Himachal Pradesh/ Outsourcing in Administration in MGNREGA Gujarat/ gnrega in Tamil Nadu Quality Management: Cost/ Sustainable Livelihood Support – Skill Development To Maintain Assets Created Under MGNREGA/ Vulnerable Groups MGNREGA, Odisha/ Wage Payment Through Bank & Post Office-Financial Inclusion in Gulbarga, Karnataka

Audience – Policy makers, researchers, academicians in rural development, rural governance, social sector development and labour development studies.

Community Governance in India

Good Practices in MGNREGA



Kush Verma • Poonam Singh

ISBN: 978-93-85909-31-3/Year 2017
Size 22.5 cm × 14.5 cm/Pages 432
Hardback/₹ 495.00

The good practices captured in this edition cover very significant topics like water harvesting, land development, soil and moisture conservation, and raising plantations. I strongly feel that these good practices should be brought forward through such publications so that the same may inspire many hearts and can be replicated elsewhere. This kind of publication is very much useful for serving the implementing agencies and those who remain engaged in rural development related activities.

The book contains 12 best practices in the MGNREGA Scheme which have emerged as a result of studies carried out in various states, at the village or rural-community level. Each chapter is a case in a best practice which throws light on one particular problem at the site, strategies to overcome it, and implementation status of those strategies. Each chapter also gives out key demographic and geographic data which helps in understanding the extent of impact these best practices have made or are making. Illustrated with lot of diagrams and pictures, this book will be immensely useful to policy makers, researchers, academicians in rural development, rural governance, social sector development, and labour development studies.

Salient Features

- Twelve hand-picked best practices at diverse community settings, which can be used as a blueprint for replicating at other places in rural India.
- Proper background of every setting has been given to understand the problem in context and therefore arriving at the solution in an appropriate manner.
- Each of the best practices has been discussed in a very structured manner including Methodology, Observations, Stakeholder's Views, Initiators, Findings and Way Forward.
- Sustainability of the MGNREGA Scheme has been kept in the focus, in each of the 12 best practices.

Contents:

Participatory Approach: Shram Shakti Sangha in Andhra Pradesh/ Horticulture Works Under MGNREGA: Good Practice of Sub-Scheme "Nandan Flodhan" in Madhya Pradesh/ MGNREGA in Tamil Nadu – Convergence with Nirmal Bharat Abhiyan/ Convergence of MGNREGA with Watershed Development in Andhra Pradesh/ Convergence of Mahatma Gandhi National Rural Employment Guarantee Act and Mukhyamantri Gram Sadak Yojana in Madhya Pradesh/ Marching Towards a Golden Harvest Well Construction in Deoghar, Jharkhand/ MGNREGA and Bharat Nirman Rajiv Gandhi Seva Kendra in Chhattisgarh/ Construction of Playgrounds in Sikkim under MGNREGA/ MGNREGA: Preparation of Labour Budget through

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

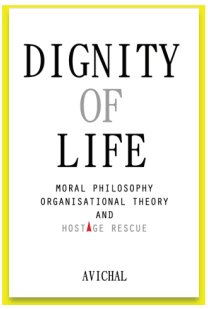
+91-011-43205400
info@ikinternational.com

Pali Sabha in Odisha/ Canal Lining with Geo-textiles in Kerala/ Good Governance Including e-Governance and ICT Approaches of Planning and Monitoring Aligarh District, Uttar Pradesh/ Climate Change and MGNREGA – Three-Pond System in Haryana

Audience – Policy makers, researchers, academicians in rural development, rural governance, social sector development and labour development studies.

Dignity of Life
Moral Philosophy, Organisational Theory, and Hostage Rescue

New



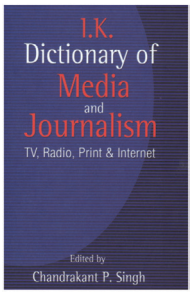
Avichal

ISBN: : 978-93-90620-74-6/Year 2023
Size 16 cm × 24 cm/Pages 762
Paperback/₹ 2495.00

Scholarly, multidisciplinary, and iconoclastic, this book provides a comprehensive study of *human behaviour in organisational setting, discusses the theory and principles of self-organisation,* elaborates the *strengths of self-organisation over command organisation*, and gives a complete roadmap to set up and sustain in any culture and society an exceptionally *capable hostage rescue force specialising in mass hostage rescue.* However, its numerous valuable insights, relying not on technology but people and employing the force of their *intrinsic motivation*, are not relevant to the niche of special forces and wider military context alone but can be employed across all occupational settings to build *highly efficient organisations where people work voluntarily and deliver responsibly without the supervision and control of command element.* Beyond formal organisations, all fields of human activities, including the private lives of individuals too can immensely benefit from radical ideas and useful information contained in it.

Audience – General

I.K. Dictionary of Media and Journalism
TV, Radio, Print & Internet



Editors

Chandrakant P. Singh

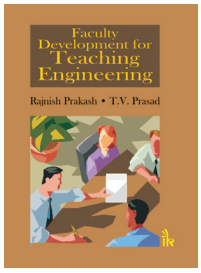
ISBN: 978-81-88237-13-5/Year 2004
Size 14 cm × 21.5 cm/Pages 344
Paperback/₹ 175.00

ISBN: 978-81-88237-08-1/Hardback

- This book is unique in the sense that it deals not only with the key concepts of media and journalism but also the related concepts originating from public relations, advertising, marketing, time-selling, management, etc.that students need to know as part of their syllabus. Over four thousand terms & concepts have been explained.
- This dictionary is designed to help its users understand the nuances of the medium for which they are trained.
- Social science students wanting to venture into media related research would find this dictionary useful.
- It will serve as an effective tool for promoting better inter-departmental understanding within the same media organization.

Audience – Students of Mass Communication and Journalism, Public Relations and Advertising.

Faculty Development for Teaching Engineering



Rajnish Prakash • T.V. Prasad

ISBN: 978-93-81141-90-8/Year 2012
Size 18 cm × 24 cm/Pages 440
Hardback/₹ 1695.00

There are numerous challenges in India in handling the higher education system. The most compelling challenge is the shortage of "effective" teachers.

This book covers almost all aspects required for bringing out 21st century engineers. values, multidisciplinary knowledge, working in a group, working in international scenarios, knowledge of project management, good written and communication skills, and many such characteristics are required by engineers for successfully performing in their professions. The advent of information technology tools in all spheres of life is another dimension to the essential characteristics. The book will motivate and inspire the readers to take advantage of new emerging technologies and use the same in their projects or research.

This book discusses methods and techniques for becoming an "effective" technical teacher since "just" teaching is not sufficient in view of the global trends. The book will particularly be useful for conducting faculty develop-ment and faculty induction pro-grammes.

Salient Features:

- The book covers the topics on effectively imparting technical education to the students both at undergraduate and postgraduate levels of all Indian universities/engineering colleges/institutes/ directorates of distance education, etc.
- Every chapter covers the contents up to a reasonable depth necessary for the intended readers in the field.
- The text is well supported with suitable tables and diagrams.
- Examples and illustrations have been provided, wherever necessary, to make the explanation clearer.
- Supporting literature such as relevant books, papers, websites, etc., that have been used or referred in the sections are included as references/suggested readings.
- Practitioner's opinions are also provided at various places of the text, which may provide a totally different view of the aspect being discussed.

Contents:

Part I: Indian Education System: Foundations of Education System/ Technical Education/National Policy on Education/International Scenario

Part II: Teaching-Learning Process: Learning Process/Teaching Process/Systems Approach to Curriculum Development/ Instructional Objectives/Instructional Methods and Media / Planning for Teaching/Assessment and Evaluation

Part III: Other Roles: Adolescent Behaviour and Motivation/Creativity and Research/Professional Ethics Values/Annexure/Index.

Audience – Faculty of Engineering and Technology.

Fail-Safe Management: Managing Failure and Succes



Srinivas Shirur

ISBN: 978-93-84588-69-4/Year 2015
Size 14 cm × 21.5 cm/Pages 210
Paperback/₹ 405.00

The objective of this book is to develop an understanding of the reasons for drastic failures, especially by wise people. It is always easier to be wise at the hindsight. Still, fair degree of precautions can be taken to avoid failures.

It takes plenty of efforts and a bit of luck to succeed. It takes a bit of bad luck to fail. It takes super effort to succeed tremendously. But it takes super effort towards stupidity to fail miserably. This book is all about that.

Business schools mainly use case studies of successful people and events for improving students' learning outcomes. Very rarely one comes across case studies about failed stories. Failures are categorized under contingency planning and are considered as an exception. That is the reason why often students find it difficult to cope with failures in actual life and fail to manage them. This book is an effort to develop capabilities in people to manage failures as well as managing success. What we must understand is that failure is part of a process, it's a

norm of life and success is an exception. This may sound as the new interpretation of the possibility of success, but it will help us to come to terms with our failures in a much better way.

In this book, the author has reinterpreted success and failure. He has strived to study cases from the lives of those who failed miserably. You will find five cases of promoters of reputed companies and five cases involving employees of firms and owners of small companies who messed up with their professional and personal life. Also, the book highlights four cases of those nations which took wrong decisions after the Second World War, and which changed the course of the world's history. Cases have been selected based on their ability to provide key learning to the readers.

Cases will cover both personality aspect of the protagonist and also background and technical details, which lead to understanding of the reasons for failure and lessons to be learnt from them.

Contents:

Part I: Individual – Why do People Fail Miserably?/Individual Fiascos/A Stupid Technocrat/The Cunning Stock Broker/A Loving Brother/An Ambitious Manager/Dilemma of a Manager

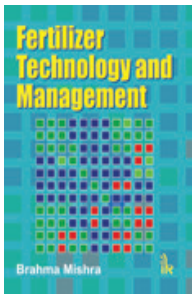
Part II: Corporate – Corporate Fiasco: Issue of Corporate Governance/Satyam Fraud: Nemesis of Ramalinga Raju/Enron Embezzlement: Nemesis of Skilling/Comparative Study of Enron and Satyam/Security Scam: Nemesis of Harshad Mehta/Dismissed From his Own Company: Nemesis of Steve Jobs/Defeated by Overconfidence: Nemesis of Vijay Mallya

Part III: Country – National Fiasco/Vietnam: Nemesis of America/Vietnam: Nemesis of America/War in Afghanistan: Nemesis of USSR/Civil War in Sri Lanka: Nemesis of India Part IV: Remedy/Nemesis of Individuals/Nemesis of Companies/Nemesis of Countries/Conclusion/Index

Audience – MBA Students, Young Managers and Professionals, Corporate Trainers and HR/OB/OD Consultants.

Fertilizer Technology and Management

Brahma Mishra

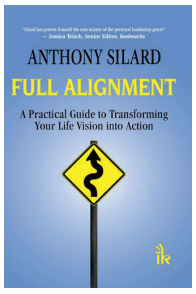


ISBN: 978-93-80026-35-0/Year 2012
Size 18 cm × 24 cm/Pages 196
Paperback/₹ 345.00

(See on page 166)

Full Alignment
A Practical Guide to Transforming your Life Vision into Action

Anthony Silard



ISBN: 978-93-80578-67-5/Year 2011
Size 16 cm × 24 cm/Pages 296
Paperback/₹ 225.00

(See on page 261)

Industrial Management

S.B. Srivastava



ISBN: 978-93-81141-92-2/Year 2012
Size 18 cm × 24 cm/Pages 520
Paperback/₹ 545.00

Industrial Management is a newly introduced subject in engineering education though it has been in the management stream since long.

The book deals with the concepts, applications and principles of industrial management exhaustively

The objective is to impart knowledge of Industrial Management for Engineering and Management students and to impart purposeful and thoughtful principles related with the area. This goal can be realized by the use of Productivity Concept, Inventory Management, Quality Control Concept and Function of Management. Environmental cleanliness is also one of the important functions to achieve the desired goal. All these and various other related areas have been dealt with exhaustively in the present book to make it self-sufficient for this particular area of study.

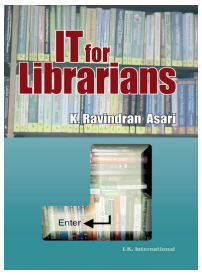
Broadly the book deals with:

- Productivity
- Management function
- Inventory control
- Quality control
- Environmental issues
- Various legislative acts for preservation of environment.

The book is mainly meant for B. Tech. and M.B.A. students.

IT for Librarians

K. Ravindran Asari

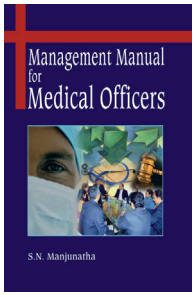


ISBN: 978-93-80026-59-6/Year 2009
Size 18 cm × 24 cm/Pages 336
Hardback/₹ 445.00
ISBN: 978-93-80026-07-7
Paperback/₹ 375.00

(See on page 42)

Management Manual for Medical Officers

S.N. Manjunatha



ISBN: 978-93-80026-11-4/Year 2009
Size 18 cm × 24 cm/Pages 156
Hardback/₹ 495.00

This is a ready reckoner about the managerial functions of Medical Officers. This is a down-to-earth practical manual containing checklist and guidelines to facilitate day-to-day functioning of Medical Officers. This can be used by Medical Officers in public and private sector, paramedical personnel like life workers, nurses, health inspector, etc. This book can also be used for teaching and training purposes in medical colleges and paramedical schools.

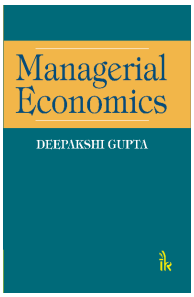
Contents:

About the Manual/The Medical Officer and his/Her Department/General Management of Community Health Centre/Primary Health Centre/Human Resource Management/Financial Management/Time Management/Material Management/Health Management Information System/Epidemic Prevention, Investigation and Control/School Health Survey Schedule/Factory Health Survey Schedule/Medical Officer and the Law.

Audience – Medical colleges and paramedical schools.

Managerial Economics

Deepakshi Gupta



ISBN: 978-93-84588-46-5/Year 2015
Size 18 cm × 24 cm/Pages 640
Paperback/₹ 625.00

Managerial Economics covers all relevant topics under the scope and the subject matter of Managerial Economics. This book is designed to provide the theoretical and applied knowledge of economics for the students of the

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info@ikinternational.com

commerce, management and engineering streams. This book is also germane for competitive exams.

Following are the different dimensions of the book:

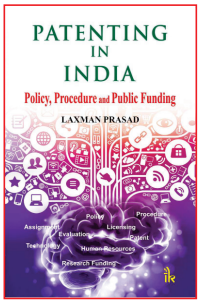
- It contains ample description of different topics.
- It is the blend of topics from micro- and macroeconomics.
- It has application oriented approach.
- Each chapter includes graphs, figures and tables to explain the concepts in an effective manner.
- It contains rich pedagogy such as: Chapter Objectives, Remember Me, Case Studies in Exhibits, Summary, Key Concepts, Review Questions, Multiple-choice Questions and Assignments.

Contents:

Introduction to Managerial Economics/Demand Analysis/Elasticity of Demand/Theory of Consumer Demand/Demand Estimation and Demand Forecasting/Theory of Supply/Production Function/Cost Analysis and Break Even Analysis/Revenue Analysis/Objectives of Firms/Competitive Equilibrium Price/Market Morphology/ Perfect Competition/Monopolistic Competition/Monopoly Pricing and Output Equilibrium/Oligopoly Market/Pricing Policy and Methods/Input Output Analysis/Concepts of National Income and its Measurements/Classical Theory of Employment/Keynes Theory of Employment/Consumption Function/Inflation and its Measurement/Fiscal Policy, Monetary Policy and Government – Key Issues/Business Cycles: Trade Cycles

Audience – Management, Commerce and Engineering streams.

Patenting in India: Policy, Procedure and Public Funding



Laxman Prasad

ISBN: 978-93-84588-93-9/Year 2015
Size 16 cm × 24 cm/Pages 316
Hardback/₹ 1995.00

The book Patenting in India: Policy, Procedure and Public Funding deals exhaustively with the patents keeping in view the requirements of the researchers, technocrats, industrialists, policy makers and others who make frantic search on one or the other aspects of patents.

The book contains 12 chapters covering all aspects right from selecting a research problem from patent literature which will have industrial significance leading to a patent, up to valuation of patents. The book covers technology policies of the government, financial resources devoted to research and manpower engaged in research in the country. Apart from this, there are various agencies providing support to pre-patenting activities. The book covers all such agencies providing financial and technical support to researchers for filing patent. These activities have been described briefly and provided with appropriate links in order to facilitate the researchers to obtain and track the information on a real-time basis.

A chapter has been specifically devoted for valuation of the patents spelling out in a very lucid manner why and when to fix up the royalty as well as the lump-sum payments. It also covers a chapter on system for disputes resolution in the country and a chapter on international arrangements for patent filing. A separate chapter has been devoted in the book detailing with examples how a patent literature may form a resource material for researchers for identification of research problem for them to undertake or how the patent is helpful in avoiding duplication of the research work. An attempt has been made to cover important aspects of assigning and licensing of the patented invention in addition to the methodologies generally used for valuation of the patented invention.

This book is an important compilation meant for researchers as well as for industries.

Salient Features:

- It contains the necessary forms to facilitate the researchers to file patent application in India as well as overseas.
- It provides relevant clauses of the Patents Act on the spot of the subject being dealt with.
- It provides an Epilogue to help the researchers for further investigations and to suggest policy changes so that the conditions of the grant of the patent are followed routinely without fail.
- It provides at the end of all the chapters with major titles as annexed.
- It contains enough examples and case studies for supporting the text.

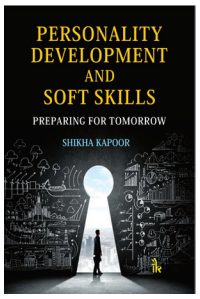
Contents:

Prologue/Policy, Infrastructure and Resources for Pre-patenting Activities/Patent Information – A Tool for Planning Future Research/ Evolution of Patent Law and Patenting System in India/Procedure for Patenting in India/Patenting Beyond India/Rights and Obligations of Patentee/Striking Balance between Monopoly and Public Welfare/ Whether to Assign or License a Patent?/How to Value a Patent?/ Patent Dispute Resolution System in India/Epilogue/Abbreviations/ Appendices

Audience – Researchers, Scientists, Industry Professionals, Policy Makers.

Personality Development and Soft Skills

Preparing for Tomorrow



Shikha Kapoor

ISBN: 978-93-85909-88-7/Year 2018
Size 18 cm × 24 cm/Pages 362
Paperback/₹ 525.00

This book has a strong conceptual and practical framework to help learn about self, build, develop and manage to work in teams for self and organizational growth. It is designed with an objective to identify the needs of the present generation and empower them with the right set of skills to make them employable. With the bunch of soft skills, the book chips in to fill the void between the university curriculum and current industrial needs. The book gives them an inner edge and effectiveness to work with people and excel at workplace.

A guide for honing soft skills by discovering self, it provides strong practical orientation to the students and help them in building and improving their skills in communication, business correspondence, presentations, team building, leadership, time management, group discussions, interviews and interpersonal skills. It also helps in career visioning and planning.

Salient Features:

- Features a practical and time-tested learning programme on soft skills to build employment skills quickly.
- Addresses the requirements of honing of soft skills as a necessary part of one's personality.
- Provides several case studies and stories to illustrate the concepts discussed.
- Lays emphasis on personality improvement tests and other exercises to develop one's soft skills.

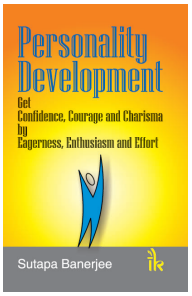
Contents:

MODULE 1: SELF
Personal effectiveness/Self development/Communication,/Presentation
MODULE 2: GROUP
Group behaviour/Team dynamics/Synergy
MODULE 3: ORGANIZATION
Managing change/Creativity in organization/Business communication/ Work Life Success

Audience – Students, job aspirants, professionals and libraries.

Personality Development

Get Confidence, Courage and Charisma by Eagerness, Enthusiasm and Effort



Sutapa Banerjee

ISBN: 978-93-81141-84-7/Year 2012
Size 14 cm × 21.5 cm/Pages 176
Paperback/₹ 295.00

The book focuses on several behavioral traits that have immense impact on the growth and development of personality. In the fast competitive world one often finds it difficult to cope up with the pressure that triggers frustration, agony and depression. It is precisely for this we need to train and develop our behavior and personality so that we can achieve success and accomplish the goals that we set in life. Life becomes enjoyable when we are respected and admired by others for the personality that we have. An individual with a charming personality is the source of inspiration for many.

Contents:

1. Personality

Emotional Intelligence /Key Features of Personality / Values and Beliefs: Our Actions and Interactions Reflect our Values / Social and Individual /Attitude / Role of Gender and Sex / Outlook / Perception / Patience and Endurance / Dress and Appearance / Mannerisms and Behavioural Patterns / Communication / Attributes and Traits that Shape Our Personality / Need for High Emotional Quotient

2. An Overview of Personality Development

The Importance of Well Nourished thoughts in Social Context / How Can You Achieve That / Let us Read for Our Pleasure / Lev Tolstoy / What is Essence of Literary Thought?

3. Emotional Manifestations

Devotion and Dedication / Communication and its Impact on Personality

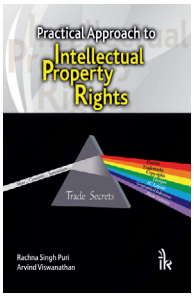
4. Values and Ethics that we imbibe from art and literature

Health and Mind / Punctuality and Practice / Motivation / Interest and Desire / Tolerance / Honesty and Integrity / Humility / Love and Faith

5. Conclusion

Audience – General

Practical Approach to Intellectual Property Rights



Rachna Singh Puri
Arvind Viswanathan

ISBN: 978-93-80026-69-5/Year 2009
Size 16 cm × 24 cm/Pages 196
Hardback/₹ 495.00

This book covers key aspects of intellectual property rights (IPR) from the perspective of an intellectual peroperty owner of a creation and for beginners in the IPR Profession. It is designed to give the reader a complete picture of all the different forms of intellectual property. To that end, the book is designed in such a way that it starts from an individual's perspective as one who has created or will create intellectual property. Then the methods and procedures required to be followed to procure the protection in an effort to familiarize the reader with the procedural aspects.

This book also focuses on patents and related aspects in a greater manner, due to the complexity and the detail oriented, and the technical nature of the field. Several chapters are dedicated to patent related matters, including patent preparation, prosecution, patenting strategy, patent reading, patent searching and analysis, and so on. The underlying principles behind the laws and rules related to patents are presented, and its applicability in everyday work is also provided. Subsequently, the nuances related to three jurisdictions, including India, European Union and U.S. are also discussed. In this manner, a global perspective towards protecting one's intellectual efforts, utilizing one or more of the intellectual property rights available is given to the reader.

Contents:

Introduction to Intellectual Property Rights/Copyrights/ Trademarks/Designs and Design Patents/Semiconductor Integrated Circuit Layout Designs/Protection of Plant Varieties and Framers' Rights/Protection of Geographic Indications/ Traditional knowledge and prospects of protecting it through IPR legal regime/Trade Secrets/ Introduction to Patents/Ideas and Intellectual Property Rights/Public Disclosure, Bar Dates and Invention Record/Contents of a Patent/ Patent Draft/Filing Patent Applications/Patent Prosecution/Search and Analysis of Patent Literature/Case Laws and their Significance/ IPR Strategy and IPR Policy/Further Reading/Index.

Audience – Students, Research Professional, IPR Professional, Management.

Quality, Reliability, Infocom Technology and Industrial Technology Management



Editors

P.K. Kapur • Sunil Kumar Khatri
Ompal Singh

ISBN: 978-93-84588-57-1/Year 2015
Size 18 cm × 24 cm/Pages 344
Hardback/₹ 2445.00

Application of computer software has crossed into many different fields, with software being an essential part of industrial, commercial and military systems. Because of its many applications in safety critical systems, software reliability is now an important research area. Software vulnerability can be seen as a flaw or weakness in the system that can be exploited by an attacker in order to alter the normal behavior of the system. Vulnerability management is the cyclical practice of identifying, classifying, remediating, and mitigating vulnerabilities. Industrial Technology Management is the use of engineering and manufacturing technology to make production faster, simpler and more efficient. The industrial technology field employs creative and technically proficient individuals who can help a company achieve efficient and profitable productivity.

Papers in this book are classified into six main areas, namely, Software Reliability, Quality, Vulnerability, Optimization, Technology Management and Innovation. We hope that this book will prove to be a useful resource for academicians, researchers and engineers.

Contents:

Technology Management through Intellectual Property Rights/ Two Practical Software Reliability Growth Models for Software Project Management/Management of Technology and Innovation for Nation Building/Even, Inventors Require Help/Quality Beyond "Product and Service" Delivery/Vulnerability Discovery Modeling/ Chance Constrained Redundancy Allocation Problem with Imprecise Component Reliabilities via Genetic Algorithm: A Simulation Based Approach/Life Estimation of Electronic Sub-assembly by MultipleAccelerated Life Tests/Technology Management in Segmented Markets/Partition Algorithm for Frequent Pattern Mining Using TwoColumns Atomic Data Layout/A Production Model with Variable Holding Cost, Backloggingand Inflation under Fuzzy Environment/Location Based Authentication Using Node's Coordinates/Unification Schemes in Software Reliability: A State of Art/Life Estimation of Electronic Sub-assembly by Multiple Accelerated Life Tests/Simultaneous Consideration of Time & Price for Adoption of Consumer Durables/Green Six Sigma for Sustainable Business Practices/Introducing Path Selection Algorithm in Reliability Analysis of Component Based Software System/A Study of S-shaped Software Reliability Growth Modeling with Testing Effort/ Bass Model Incorporating Change in the Adoption Rate: A Study in Discrete Environment/Reliability Estimation of Shutdown System Considering Common Cause Failures/Retailer's Optimal Ordering Policies for Deterioration Items under Trade Credit Policy in a Supply Chain System/Genetic Algorithm Based Approach for Unbalanced Assignment Problem/Managing Launch Time of Successive Industrial Technologies/Dissimilarity Measures for Refinement of Clusters Based on Page Access, Time and Session Weight/Multi Criteria Based Launch of a New Product/Design Optimization of Post-core Restored Endodontically Treated Human Teeth Using Finite Element Method and Taguchi Methods/Testing-Domain Based SRGM for Distributed Environment Incorporating Two Types of Imperfect Debugging

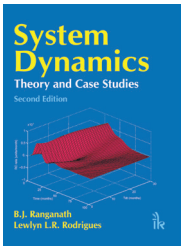
Audience – Researchers and Professionals in Technology Management, Quality Management, Software System Development.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

System Dynamics

Theory and Case Studies

Second Edition



B.J. Ranganath • Lewlyn L.R. Rodrigues

ISBN: 978-93-81141-18-2/Year 2011
Size 16 cm × 24 cm/Pages 146
Paperback/₹ 295.00

If you are a student of Engineering (any branch), B.Sc./M.Sc, or Business Management (BBM/BBA/MBA) then this book is for you. It will expose you to a subject evolved at Massacheusettes Institutes of Technology, Boston, initiated by the inventor of 'random-access magnetic core memory' - Germeshausen Professor Jay W. Forrester. The book demonstrates how to apply System Dynamics into different problem situations. Each case study is a project work undertaken at the graduate or post graduate level and beyond. Variety of problems from Insurance Sector to Engineering Competence Pool Development and Supply Chain to Product Innovation have been tackled to demonstrate the power of System Dynamics. Further, if the subject fascinates you, you may turn out to be a professional modeller, or even carry out research work in this area at the doctoral level.

The purpose of the book is not to teach you the software of System Dynamics simulation such as Vensim®, iThink™, STELLA™, MATLAB® Simulink etc., but pass you through the stages of System Dynamics model building and simulation. Once the reader gets tuned to this philosophy of System Dynamics, sky is not the limit, as you can simulate the whole cosmos, provided, you know what are the control paramters! So go ahead and enter into the world of System Dynamics.

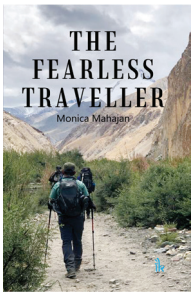
Contents:

- System Dynamics: Introduction
- Building System Dynamics Model
- Human Resource Planning Exercise
- Project Management in New Product Development: The NPD Model
- National Engineering Competence Pool Development and Deployment
- Insurance Sector Dynamics
- Manufacturing Supply Chain Dynamics
- Innovation Dynamics in Manufacturing
- Validation of System Dynamics Model

APPENDICES, REFERENCES

Audience – Engineering students of BSc/Msc or Business management

The Fearless Traveller



Dr. Monica Mahajan

ISBN: : 978-93-90620-38-8/Year 2021
Size 16 cm × 24 cm/Pages 400
Paperback/₹ 795.00

This book fulfils A to Z of your travel needs for a journey, exploring all the diversity that the World offers, with a motto that a fearless traveller is a wellinformed and a well-prepared traveller. The Fearless Traveller is a tribute to this unquenchable human thirst for travel. It prepares you to travel whether it is taking the pre-travel vaccines or packing a first-aid kit. It spells out the do's and don'ts while you trek, scuba, ride or skydive. It addresses the needs of the unborn traveller, the couple in their golden years, the pilgrim, the student, the wheelchair bound or the medical tourist. This is a treasure trove of sound technical and practical advice, which would come handy for you while you plan your next trip and even when you are deep into that trip. It inspires, it motivates. So, let's start travelling……..without fear of the unknown. Let's conquer the world.

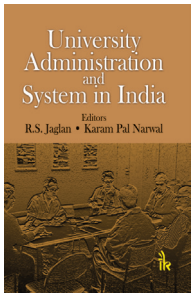
'You cannot swim for new horizons until you have courage to lose sight of the shore' –William Faulkner.

Contents:

Rise of the Phoenix/THE METICULOUS PLANNER/The Quintessential Traveller and Health/BRAVING THE ELEMENTS/ The Scorching Sun/Frozen/The Rollercoaster Ride/Travel Blues/ Delhi Belly/BUGS BUG/Beware! Bad Bugs and Beasts/The Covid-19 Saga/THE MOUNTAINS BECKON/Mountaineering: Gearing Up/ Altitude Sickness/VITAMIN SEA/Scuba: The Basics/The Risks of Scuba/Tentacles and Jaws/Water, Water Everywhere/THE ROAD LESS TRAVELLED/A Mile Long Bikeit List/The Wanderlust/Trails, Tails and Tales/SOARING IN THE SKIES/Spread Your Wings/THE INTREPID TRAVELLER/The Expectant Mom on the Move/The Young Globetrotters/Those Golden Years/Where There is a Wheel, There is a Way/The Immunity Challenge/The Diary of a Pilgrim/Haj and Umrah/In Quest of Knowledge/The Road to Recovery/S.O.S./ Medical Manjhi: The Mountain Man

Audience – Travel and Enthusiasts

University Administration and System in India



Editors

R.S. Jaglan • Karam Pal Narwal

ISBN: 978-93-81141-69-4/Year 2012
Size 18 cm × 24 cm/Pages 416
Hardback/₹ 1995.00

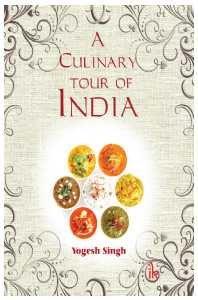
Given that the economic development, accelerated by the expanding base of higher education may lead to the reduction of other kinds of disparities—social, regional, political—its contribution in stabilizing our civil society at this juncture of volatility cannot be underestimated which, in turn may help the process of speedy national development further. The book raises all such issues. University administration and systems in India is considered the most common issue for all the stakeholders engaged in higher education especially at post-graduate level and they hardly have any authentic literature to understand the same. This predicament of interested readers particularly requires instantaneous efforts on the part of academe. The present book is an endeavour to meet the expectations of teachers, students and policy makers. The book includes thirty-three chapters. The basic concepts have been elucidated with suitable illustrations for covering the underlying spirit on the subject. All the chapters have been deliberated by the scholars into an uninterrupted sequence and all conceptual details provided in this text are in self-instructional mode. It is expected that the readers would find this book quite valuable and receptive.

Contents:

How to Create World-Class Universities / Governance in Higher Education: International Scenario / Governance of University System in India / The Expansion of Higher Education in India / India Needs World Class Institutes in Higher Education / Challenges Faced by Higher Education in India / Hiatus between Administrators and Faculty in Higher Education Institutions / Imbalance and Inequalities in University System in India / Possible Reforms and Quality Issues for Indian Higher Education: Challenges & Prospects / Accountability and Governance in University System / Administration, Accountability and Governance in University System / Objectives and Role of University Education / Change and Reform in University Education / University Education in Changing Environment: Some Issues and Challenges / Quality Assurance Agencies for Higher Education in India / Universities and Reforms in Higher Education: Some Issues of Concern in Haryana / Doctoral Research in Indian Universities: Some Quality Monitoring Issues / Women and Higher Education in India / ICT Enabled Good Governance for Universities / Students' Learning Evaluation in Higher Education: A Case Method Approach / Psychology and Metrics in Engineering Education / Higher Education in the Era of Digital Economy / ICT Driven Higher Education: Its Effectiveness / Higher Education Vis-À-Vis Status and Roadmap for Media Education in India / Role of Work Culture & Values in Improving Academics of Universities in India / Role of Technology in Media Education / Teaching Technology for University and College Teachers / Curricular Planning of Pave the Higher Education Pathways / Human Resource Management in the University System / Functioning Profile of University Works Department / Status of Agricultural Education in India / Indiscipline in the Universities / Financial Management in Universities / *Index*

Audience – Educationists & Policy-makers

A Culinary Tour of India



Yogesh Singh

ISBN: 978-93-84588-48-9/Year 2015
Size 22 cm × 28 cm/Pages 328
Paperback/₹ 595.00

A Culinary Tour of India is an honest endeavour in comprehensively describing and generating awareness about the history, evolution and impact of various elements on the remarkable cuisine of our country. The regional variations along with wide-ranging cooking styles and various facets of Indian cuisine have been researched and compiled for the information of the food enthusiasts and budding hoteliers. This recherché book would act as a reference point for all Bon vivant, Hotel Management graduates and those pursuing their career in the hotel industry.

While the market is flooded with books containing recipes from Indian cuisine, this book takes you on a gastronomic journey of the country providing an encyclopedic perspective of the magnificent flavours and aromas of this wonderful land.

The first part of the book familiarizes the reader with a panoptic perspective of Indian cuisine emphasizing on ingredients and food produced and consumed in different periods. It also features certain gastronomic references from the ancient eras like Vedic ages and treatise like Ramayana and Mahabharata as well. This section depicts shaping up of splendid Indian cuisine with an impact of distinct religions and also brief description of brilliant festive foods. It also laconically features about the relation of food with Ayurveda.

The second part is the soul and embodiment of the book depicting the crucial culinary details and trends of almost every state of India. It brings into light the finer aspects of culinary system, the eating trends and habits, the staple diet and the speciality dishes. This section of the book focuses on the various regional cuisines of India and put forward the culinary viewpoint and food patterns, emphasizing the speciality dishes of each state with their brief and compendious descriptions.

The third and last part highlights various noteworthy and significant aspects of Indian cuisine like spices, different gravies, breads, beverages, sweets, biryani and pulao; and kitchen equipments in detail.

Contents:

India: A brief introduction

Part A: Indian cuisine

A broad perspective/Shaping up of Indian cuisine/Classification of food/Impact of religion on Indian cuisine/Catering trends in India/Festive foods of India/Food and ayurveda/Brief introduction of Indian cuisine

Part B: Regional cuisine: Gastronomic overview

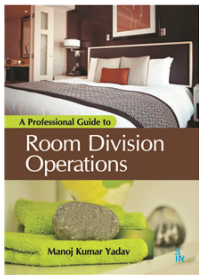
Awadhi cuisine (Uttar pradesh)/Bengali cuisine/Bihari cuisine/Goan cuisine/Gujarati cuisine/Haryanvi cuisine/Himachali cuisine/Hyderabadi cuisine –andhra pradesh/Karnataka cuisine/Kashmiri cuisine/Kerala cuisine/Madhya pradesh cuisine/Maharashtrian cuisine/North eastern cuisine of india/Odiya cuisine/Punjabi cuisine/Rajasthani cuisine/Sikkimese cuisine/Tamil nadu cuisine/Uttarakhand cuisine/Community cuisine

Part C: Significant topic: Soul of indian cuisine

Spices – heartbeat & essence of indian cuisine/Basic gravies and pastes/Tandoor – marinades and tenderizers/Biryani and pulao/Breads/Sweets/Beverages/Equipments.

Audience –Hotel Management, MBA Hospitality Management.

A Professional Guide to Room Division Operations



Manoj Kumar Yadav

ISBN: 978-93-85909-93-1/Year 2019
Size: 18 cm × 24 cm/Pages 510
Paperback/₹ 595.00

A Professional Guide to Room Division Operations is a training manual for the students and professionals in the room divisions of hospitality organizations. The book is divided into two parts – Part I is on **Front Office Operations**, which discusses topics like front office organization, revenue resources, guest segmentation, reservation, tariff, reception, bell centre, support centres, call operations, billing, handling special situations, guest cycles and so on. The second part on **Housekeeping Operations** discusses topics on linen and uniform room operations, organization of housekeeping, cleaning and polishing, public area cleaning, area inspection, in-room services, interior decoration, laundry services, pest control and waste disposal, safety and security, room selling techniques, night auditing, and so on. With its wide coverage and approach to the subject, the book will serve as a complete standalone resource for students, front office, hospitality and housekeeping professionals.

Salient Features:

- Learning aids include learning objectives, examples, chapter activities, key terms and review questions.
- Every operation is given in a step-wise manner following the standard operating procedures in the industry
- Scroll boxes have been used to present important and interesting facts.
- Labelled diagrams have been used to aid understanding of the concepts.

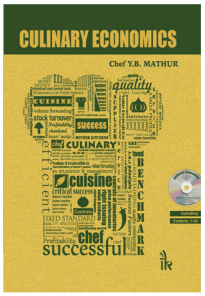
Contents:

Part A: Front Office Operations—Introduction to Hotels/Introduction to Room Division/Front Office Organization Structure/Hotel Revenue Resources and Guest Segmentation/Prologue with Rooms/Room Tariff/Reception Section/Cash Section/Telephone Section/Reservation Section/Bell Desk/Supportive Centres/Mail & Message Section/Handling Situations/Registration/Guest Cycle

Part B: Housekeeping Operations—Role of Housekeeping/Housekeeping Organization Structure/Linen and Uniform Room/Cleaning and Polishing/Guest Room Cleaning, Inspection and In-Room Services/Public Area Cleaning and Inspection/Laundry Services/Fabrics and Fibres/Interior Decoration/Flooring and Wall Covering/Pest Control and Waste Management/Safety and security/Room Selling Techniques/Night auditing/Coordination of Front Office with Other Departments/Index

Audience – Hotel management, Hospitality/Tourism Students, Hospitality Industry Professionals

Culinary Economics



Chef Y.B. Mathur

ISBN: 978-93-85909-19-1/Year 2016
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 995.00

"A comprehensive treatise that addresses the multidimensional challenge of running a profitable food service business".

--Mr. K. Vaidyanath, *Non-Executive Director ITC Board*

"Each food production exercise documented has been carefully chosen, treated with justice and transformed into a culinary entrepreneur's dream".

--Professor Satish Jayaram, *Principal, Institute of Hotel Management, Aurangabad*

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

The market for culinary businesses is burgeoning in geometric progressions each year. Failure of some of the world's best culinary businesses happens due to the poor knowledge of culinary economics. Given its all-embracing content, 'Culinary Economics' is a classic for students and practitioners alike with cost management as the essence of this book. The book deals with the systematic examination of various factors of food production economics. It is panoramically sweeping in its content, integrating the critical dimensions of F&B controls, procurement, inventory management and revenue strategy. It highlights the imperative of using audit and internal controls as effective instruments for not only plugging value leaks, but also as a means of enhancing quality and customer satisfaction.

The book logically flows from the macro to the micro of the dynamics of culinary business. Each module provides the conceptual framework of the topic, including its context, criticality and significance, followed by detailed explanations. The exhibits are an invaluable supplement and ready reckoners, bringing focus to each part of the book.

Salient Features:

- The language and style seamlessly combine with the content and format to render the book an extremely reader-friendly experience.
- Demonstrates the transformation of the chef in recent years from being a creative artist in the kitchen to that of a smart business manager who is expected to deliver a cost-efficient and profitable food service business.
- Will serve as a "go-to" compendium for students, trainers, faculty members, F&B managers, chefs, venture capitalists, consultants, auditors, and controllers in food & beverage, and hotel industry.
- Each chapter has been carefully modelled accompanied by exhibits and examples.

Contents:

Module I: The Culinary Business

Module II: Culinary Ingredients

Module III: Costs – Core of Culinary Economics

Module IV: Menu Engineering-Culinary Business Analytics

Module V: Culinary Materials Management: The Concept

Module VI: Culinary Materials Management: Efficient Management of Purchasing Activities

Module VII: Culinary Materials Management: Selecting the Right Supplier

Module VIII: Culinary Materials Management: Right Receiving

Module IX: Culinary Materials Management: Efficient Storing, Inventory Management and Right Issuing

Module X: Culinary Materials Management: Economics of Food Production and Food Service

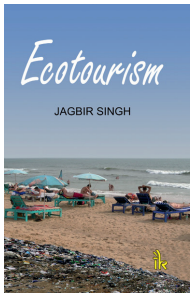
Module XI: Controls

Module XII: Kitchen Stewarding

Module XIII: Objectivity and Subjectivity in Culinary Businesses

Audience – Students, Trainers, Faculty Members, F&B Managers, Chefs, Venture Capitalists, Consultants, Auditors, and Controllers in Food & Beverage, and Hotel Industry.

Ecotourism



Jagbir Singh

ISBN: 978-93-80026-96-1/Year 2010
Size 16 cm × 24 cm/Pages 232
Hardback/₹ 595.00

There will always be tourists. In spite of terrorist attacks which have had a decimating effect on the whole Tourism Industry throughout the world. Mankind has an uncanny knack of "bouncing back." To make a new world for the 21st century, we need to develop Ecotourism on a much larger scale and educate the public to get back to the beauty of nature and preserve what is left of the ecology in the environment. This book will help the students, research scholars and teachers in providing the latest information on the tourism industry. It sets out in detail all of the aspects of the different types of tourist, details of destinations and means of transport. Above all, we must respect the laws and cultures of other countries throughout ecotourism, we have a chance to renew and beautify the world.

Contetns:

Introduction/History of Tourism/Tourism Types and Motivations/ significance of Tourism/Tourism Marketing/ Dimensions of the Hotel Industry and Globalization/Transport in Tourism/Tourism Products, Advertising and Promotion/ Different Countries and Organizations in Tourism/Ecotourism/Tourism Policy and Planning/Information Technology in Tourism/Glossary/Appendices/References/Index.

Audience – Students in Tourism & Environment.

Food and Beverage Services & Operations



Manoj Kumar Yadav

ISBN: 978-93-85909-94-8/Year 2020
Size: 18 × 24 cm/Pages 608
Paperback/₹ 695.00

Food and Beverage Services & Operations is specially written for the students and industry professionals who would work or are working in the food and beverage divisions of hospitality organizations. The book is divided into two parts – Part I is on Food and Beverage Service Operations, which discusses topics like catering services, restaurant services, room services, banquet services, food services, meals and menus, Guéridon services, range of alcoholic/non-alcoholic beverages, wine world, beers, white spirits, brown spirits, tobacco products, cocktails, sales and revenue control systems, and so on. Part II is on Food Production Operations which discusses topics on kitchen management, principles of cooking, various kinds of vegetarian and non-vegetarian cookery, SSSS (Soups, Stocks, Sauces & Salads), basic commodities, gravies and curries, garnishes, food plating, cold kitchen, nutrition, hygiene and safety. With its wide coverage and approach to the subject, the book will serve as a complete standalone resource for students, chefs and food & beverage service professionals.

Salient Features:

- Learning aids include learning objectives, examples, key terms and review questions.
- Every service operation has been given in a step-wise manner following the standard operating procedure in the industry.
- Scroll boxes have been used creatively to present important and interesting facts.
- Well-labeled diagrams have been used profusely to aid understanding of the concepts

Contents:

Part A: Food and Beverage Service Operations

Introduction/Food and Beverage Organizational Structure/Food and Beverage Service Equipment/Food and Beverage Department Coordination/Restaurant Operations/Room Service Operations/ Technical Proficiency/Banquet/Meals and Menu/French Classical Menu/Guéridon and Carving/Types of Service/Introduction to Beverages/Non-Alcoholic Beverages/Fermented Beverage – Wine/ Old Wine World/New Wine World/Brewed Beverage: Beer/ Distilled Beverages: Spirits/Brown Spirits/White Spirits/Liqueurs, Aperitifs, Vermouths, Bitters and Other Spirits/Introduction to Bar 317/ Tobacco Products (Cigar and Cigarette)/ Sales/Revenue Control

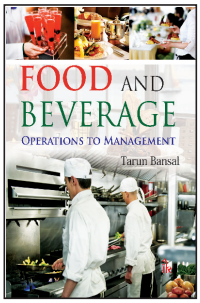
Part B: Food and Beverage Production Operations

Introduction to Cuisine/Introduction to Kitchen Organization/ Fundamentals of Food Production/Stocks, Soups and Sauces/Fruit and Vegetable Cookery/Egg Cookery/Seafood Cookery/Poultry Cookery/Meat Cookery/Game Cookery/Dairy Products/Rice, Cereals, Pulses and Pasta Cookery/Introduction to Basic Ingredients 40. Shortenings (Fats and Oils)/Supporting Agents/Herbs and Spices/ Basic Gravies, Curries and Sauces/Salad and Salad Dressing/ Food

Plating and Presentation/Nutrition/Basics of Bakery/Cold Kitchen/Safety and Hygiene/The Power of Skills/Bibliography/Index

Audience – Hotel management/Hospitality students. Hospitality industry professionals

Food and Beverage: Operations to Management



Tarun Bansal

ISBN: 978-93-84588-79-3/Year 2016
Size 18 cm × 24 cm/Pages 768
Paperback/₹ 825.00

Food and Beverage: Operations to Management is a comprehensive textbook for the students of hotel management. This book has a wide coverage of various courses viz; foundation course in food and beverage service, food and beverage operations, advance course in food and beverage service, cost control and food and beverage management and provides up to date information about the food and beverage sector. The book is divided into 19 chapters beginning with development of catering industry in India and further exploring the potential of Indian catering industry, spread in several chapters on Food and Beverage Operations, Bar Operations, Gueridon Operations, Menu Management, Tobacco, Non Alcoholic and Alcoholic Beverages, Sales Control, Bar Management, Event Management, Food and Beverage Marketing, Managing Human Resource in Food and Beverage and Food and Beverage Business Model.

Salient Features

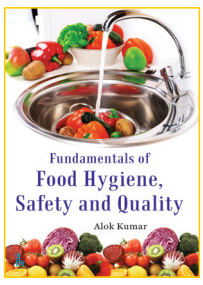
- Provides complete compendium from fundamental of food and beverage operations to food and beverage management.
- Explains management of a restaurant, bar, banquet and event.
- Includes more than 200 recipes of mocktails, cocktails and gueridon operations.
- Contains details about the leading suppliers of the country.
- Explains wines of the world.
- Includes numerous table cover diagrams, tables and flow diagram.
- Provides sample Formats of food and beverage department.
- Provides end of chapter self-assessment exercises, concept review questions and web based exercises.

Contents:

Introduction to the Indian Hospitality and Tourism Industry/Catering Business Development and Classification/Restaurant Organization and Management/Food and Beverage Ancillary Departments/Food and Beverage Service Equipment/Menu Management/Food and Beverage Operations/Food and Beverage Sales Control System/Non-Alcoholic Beverages/10. Alcoholic Beverages/11. Bar Management/12. Tobacco/13. Gueridon Operations and Management/14. Banquet and Off-Premise Operations and Management/15. Event Management/16. Food and Beverage Management/17. Marketing Food and Beverage Services/18. Managing Human Resources/19. Managing Successful Food and Beverage Business/Index

Audience – B.Sc/Diploma students in Hotel Management, Bartending and Catering Students, Bar/Restaurant Stewards/Mixers/Managers.

Fundamentals of Food Hygiene, Safety and Quality



Alok Kumar

ISBN: 978-93-86768-34-6/Year 2019
Size: 16 cm × 24 cm/Pages 232
Paperback/₹ 345.00

This book, divided in ten chapters, deals with topics like significance of food hygiene, quality and safety in hospitality industry, food microbiology, various microorganisms & their growth, causes and prevention of foodborne diseases. It explains the concept of purchase, receiving and storage of food ingredients in food service establishments, hygienic handling of food in food service operations. It also includes topics like personal hygiene, safety issues in catering establishments like fire & accident prevention/control and first-aid. It highlights how locations for catering outlet are selected and planned from sanitation point of view.

It further deals with topics like cleaning & disinfection of premises, dishwashing, cleaning agents, pest control, importance of water, waste and sewage disposal. Various food laws and regulations like international regulations pertaining to food and new food laws of India (Food Safety and Standard Act, 2006), Prevention of Food Adulteration Act, 1954 and other national & international food regulations are given in detail. It discusses food adulteration and its method of detection & control, and focuses on concepts of labeling & traceability and types & trends in packaging. It deals with Quality Assurance, Codex Alimentarius, GHP, GMP TQM, ISO 9000, ISO 14000, ISO 22000 and its importance, quality and international food standards. The concept of HACCP and its applications in food establishments are explained in detail. It highlights genetically modified food, its safety concerns and advantages & disadvantages, role of biotechnology & food security, risk assessment and risk management of food.

For further reference readers may refer to *HACCP: Applications and its Challenges* another book by the same author and publisher.

Salient Features:

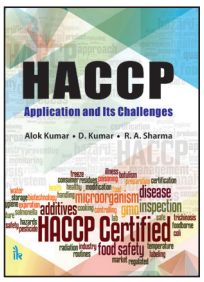
- Explores key elements of food safety & quality with fundamental theoretical concepts & techniques for food operation in hospitality sector.
- Deals with latest food safety techniques, food laws, regulations, practices and standards followed worldwide.
- Emerging international issue of concern in food sector.

Contents:

Food Safety, Microbiology & Foodborne Diseases/Food Spoilage, Food Preservation, Beneficial Role of Microorganisms and Food Storage/Safe Food Handling/Sanitation of Premises/Food Laws and Regulations/Food Adulteration, Labeling and Packaging/Quality and Food Standards/Hazard Analysis and Critical Control Point (HACCP)/Genetically Modified Food, Risk Assessment and Accreditation in Food Sector/Case Study of Street Food in Ahmedabad (Gujarat), India

Audience – Hospitality & Catering, Home Science, Food Processing, Food Science and Environmental Science courses

HACCP: Application and Its Challenges



Alok Kumar
D. Kumar
R. A. Sharma

ISBN: 978-93-86768-41-4/Year 2019
Size: 16 cm × 24 cm/Pages 168
Paperback/₹ 295.00

Adoption of Hazard Analysis Critical Control Point (HACCP) system for production of safe food is gaining momentum in the food industry. HACCP is a scientific system to identify, monitor, and control contamination risks in food industry.

This book addresses the demands of the hotel industry in the new millennium. Educators who are preparing professionals for roles as food & beverage managers, chefs and general managers in hotels are required to meet the challenges of operations, technology, training, international laws practices and applications. This book will encourage and support researchers to conduct meaningful studies on Food & Hotels which is one of the fastest growing industries in India.

This book will be of interest to a wide readership, to food scientists in industry, in research institutes, and in consultancy, food auditors & HACCP Certification trainers and to government officials and advisors. It is an essential reading for students in hotel management, food science and environmental/home science courses.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Salient Features:

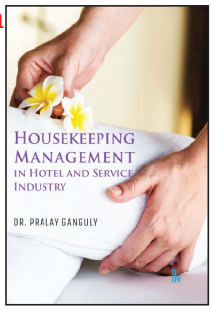
- comprehensively designed to be handbook for HACCP for its application in food sector.
- helpful as reference book for undergraduate, postgraduate students and researchers.
- fills vacuum of unavailability of book on HACCP in Indian context.
- explains the application of HACCP in hotels and challenges associated with it with the help of survey conducted in NCR Delhi.
- handy to hotel professionals and a food operator who wishes to implement HACCP & ISO 22000 program.

Contents:

Introduction/Hazard Analysis and Critical Control Point (HACCP)/ Food/General Hygiene and Manufacturing Practices/Regulations in Food Sector/Challenges in Application of HACCP in Hotels/NCR Delhi (India)–An Overview/Case Study of NCR Delhi/Conclusion/ References/Index

Audience – Hospitality & Catering, Home Science, Food Processing, Food Science and Environmental Science courses.

Housekeeping Management in Hotel and Service Industry



Pralay Ganguly

ISBN: 978-93-86768-24-7/Year 2019
Size 18 cm × 24 cm/Pages 384
Paperback/₹ 525.00

The present text is a comprehensive textbook for various stakeholders engaged with hospitality industry especially rooms division. This book has a wide coverage of various courses of hospitality operations and management, namely, foundation course or short-term course in housekeeping, accommodation operations, advance course in rooms division, accommodation management with modern trends and provides up-to-date information about the accommodation sector. The book is divided into 19 chapters beginning with introduction to hotel, hospitality and housekeeping, spread in several chapters highlighting operational perspectives of rooms division and finally some chapters on accommodation management.

Salient Features:

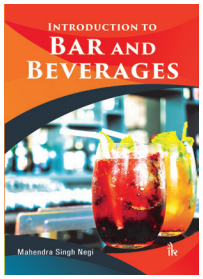
- Complete compendium from fundamentals of housekeeping to housekeeping management.
- Management of rooms, public area, linen & laundry, environment, planning trends, PMS of housekeeping department.
- MCQs related to the whole book.
- Numerous tables, figures, diagrams and pictures
- Sample formats of housekeeping department.
- End of chapter self-assessment exercises, concept review questions and key words.

Contents:

Introduction to Hospitality, Hotel and Housekeeping/Organization of Hotel & Housekeeping, Duties & Responsibilities/Cleaning Organization/Housekeeping Procedures and Routine Work/ Housekeeping Responsibility Area and Care-Composition of Different Surfaces/Linen, Uniform & Tailor Room/Laundry Operation and Stain Removal/Interior Decoration/Textiles/Floor and Wall Covering/Windows, Soft Furnishings and Guest Room Accessories/ Housekeeping Budget and Control/Purchasing System/Planning of a Guest Room/Environmental Practices in Housekeeping/Managing Housekeeping Personnel/New Trends in Housekeeping/New Property Operations/Flower Arrangement/References/Glossary/ Question Bank (Multiple/Objective Type)/Index

Audience – Hotel management students.

Introduction to Bar and Beverages



Mahendra Singh Negi

ISBN: 978-93-86768-35-3/Year 2019
Size: 18 cm × 24 cm/Pages 416
Paperback/₹ 625.00

The modern concept of the hotel is to provide not only accommodation and food and beverage but also offer every possible facility, service and convenience to its guests. Of these services, beverage service is a major component and an important part of hospitality industry.

The book provides a guide for alcoholic and non-alcoholic beverages not only for the hospitality management students but also for industry professionals. The content, scope and application of this book are reflective of the best global practices in the field of bar operations from an organization and vis-a-vis customer's prospective. It also discusses the new trends in bar and drinks such as mixology, infusion, role of information technology and many more.

With the help of SOPs compiled from various five-star hotels it will help students to understand the right procedures of serving different types of beverages in bar and restaurant. Giving particular emphasis on bar, beverages, cocktail and their services, this book can be utilized by the personnel working in food and beverage service departments.

Divided into two sections — the book elaborates the theoretical knowledge about bar, wines, spirits, cocktails, tobacco and cellar management and practical aspects of the standard operating procedures of beverage services. Practicing these SOPs students can achieve excellence in the bar and restaurant service skills and would be able to understand:

- The role of bartender in the bar
- Duties and responsibilities of bartender
- Bar management skills
- Insight into various alcoholic and non-alcoholic beverages
- Cocktail making methods and recipe.
- Right procedure of serving drinks to the guest
- Identify various new trends in bar and restaurant industry

Salient Features:

- Photographs, images and tables related to service procedures.
- New trends in the bar and drinks such as mixology and infusion.
- SOPs compiled from various five-star hotels.
- Procedures of serving wine, spirits, cigarettes and cigars.
- Activities for field base learning.
- Suitable for F&B professionals and aspiring bartenders.

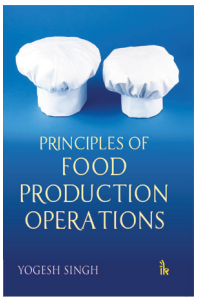
Contents:

The Bar/Bar Designing/Bar Glassware and Equipment/Bar Condiments/Non-alcoholic Beverages/Alcoholic Beverages/Beer/ Whisky/Whiskey/Rum and Tequila/Brandy/Gin and Vodka/ Liqueurs/Other Famous Spirits/Introduction to Wine/World Wines/New World Wines/Champagne/Fortified Wines/Aperitifs and Bitter/Food and Wine Pairing/Cocktails/Cellar Management/ Tobacco/Bar Licence/Fruits, Nuts, Herbs and Spices/New Trends in Bar/Bar Set Up/Presenting Beverage Menu/Service of Non-alcoholic Beverages/Service of Tea and Coffee/Beer Service Procedure/Service of Straight Drinks/Spirits/Service of Wine (Red and White)/Service of Champagne/Sparkling Wine/Service of Cocktails and Mocktails/ Service of Cigars/Cigarette/Case Study/Index

Audience – Students of hotel management and food & beverages, professionals like restaurateurs, waiters and bartenders, mixologists, airhostesses, stewards, etc.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Principles of Food Production Operations



Yogesh Singh

ISBN: 978-93-85909-25-2/Year 2017
Size 18 cm × 24 cm/Pages 374
Paperback/₹ 595.00

Principles of Food Production Operations describes the fundamental principles of the world of the culinary arts – both theory and practice. Divided into four parts: Food Production Operations, Basic Preparations, Commodities Used, Bakery and Confectionery; the book has been conceptualized and designed to be an indispensable textbook for Hotel Management students for various degree and diploma courses in food production. The book covers the latest curricular requirements of the Hotel Management syllabi. Besides being a treasure trove for students, this book will be a useful reference for professional and budding chefs, hoteliers and restaurateurs, and any food enthusiast.

Salient Features:

- Gives a detailed perspective of all major aspects of food production like cooking methods, stocks, soups, sauces, salads, sandwiches, bakery, etc.
- Discusses the characteristics, nutritional aspects, usage patterns, buying tips, storage, and so on of commodities like egg, meat, poultry, fish, vegetables, spices, grains, and dairy products.
- Appropriately addresses the latest trends like molecular gastronomy, gastrophysics, HACCP, organic foods, etc.
- Amply illustrated with labelled diagrams and pictures, making the concepts easier to understand.

Contents:

Part A: Introduction to Food Production Operations

Introduction to Cookery/Kitchen – An overview/Demystifying the World of Catering/Kitchen Equipment/Cooking Methods/Latest Trends in Cookery

Part B: Basic Preparations

Stocks/Soups/Sauces/Salads/Sandwiches/Garnishes and Accompaniments

Part C: Commodities Used

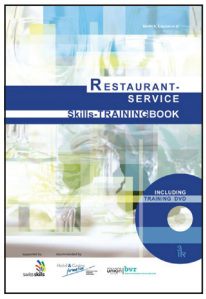
Egg Cookery/Meat and Poultry/Fish and Shellfish/Vegetables/ Dairy Products/Flavoring: Herbs and Spices/Grains

Part D: Basics of Bakery and Confectionery

Understanding Bakery/Bread Basics/Basics of Pastry and Cream/ Appendix I: English Terms and Their French Equivalents/Appendix II: Culinary Terminology

Audience – Students of B.Sc (HM), Diploma in Food Production, and Food Craft courses. Professional chefs, hoteliers, restaurateurs, caterers and food entrepreneurs.

Restaurant Service Skills Training Book



Martin A. Erlacher, et al.

ISBN: 978-93-85909-32-0/Year 2017
Size 22 cm × 28 cm/Pages 346
Paperback/₹ 795.00

"I am very pleased to express my appreciation of this unique educating book for participants with a few written lines. I want to congratulate and pay a compliment to the authors for their impressive achievement."

Max Züst, Director, Hotel & Gastro formation, Switzerland

In this skills training book, important working techniques and helpful information, for the restaurant service, are described comprehensively and are featured with photographs. The accompanying DVD, with more than 40 videos, gives visual treatment of various working techniques.

This book contains valuable experience of a World Skills World Champion, national and international experts, examination experts and instructors. It is a book for the normal working day in the restaurant business and an ideal preparation tool for competitions and examinations. Various point of views and techniques described in this book combine international standards and accepted guidelines for associations.

The following topics are to be found in this book:

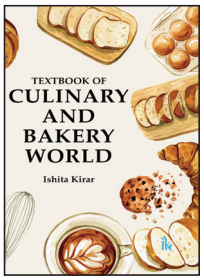
- Service forms und service methods
- Arranging and working equipment
- Basic service rules
- Mise en place and napkin forms
- Laying tables and various covers
- Preparation and portioning of cold dishes
- Filleting and cutting of fruit
- Filleting and cutting of fish
- Carving and cutting of poultry and meat dishes
- Preparation and flambéing of various dishes
- Preparing coffee beverages "Barista"
- Preparing bar beverages and cocktail recipes
- Technical terms
- Recipes

Contents:

Indications for users/Service-methods and service-processes/ Arranging and working equipment/Basic service rules/Preparation for service/Preparation and portioning of cold dishes/Filleting of fruit/Filleting of fish/Carving of meat and poultry/Flambéing and preparing of dishes/Portioning of cheese/Preparing coffee beverages/Preparing bar beverages/Technical terms/Recipes

Audience – Hotel and Hospitality Industry Service Professionals, Diploma and BSc HM (F&B Services) courses

Textbook of Culinary and Bakery World



Ishita Kirar

ISBN: 978-93-86768-88-9/Year 2020
Size: 16 × 24 cm/Pages 384
Paperback/₹ 395.00

Culinary means connected with cooking or kitchen and bakery a place where bread and cakes are made. Culinary and bakery is an art as well as a science, and mastery in baking kitchen allows the bakers to be creative in exploring new quality products from inconsistent ingredients and process conditions. This book gives a succinct account of the practical and theoretical knowledge, including methods and processes involved in the preparation of various products.

Contents:

Part 1: Basic Commodities

Milk/Cream/Cheese/Butter/Flour/Shortenings (Fats & Oils)/ Raising Agents/Thickening Agents/Sugar

Part 2: Bakery and Confectionery

Pastry Creams/Pastry/Icings & Toppings/Frozen Desserts/ Chocolate/Breads/Meringues

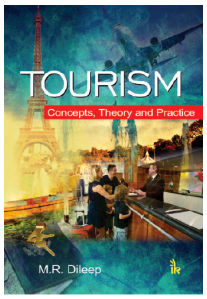
Part 3: Recipe/Index

Shelving – Hotel Management.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

+91-011-43205400
info@ikinternational.com

Tourism: Concepts, Theory and Practice



M.R. Dileep

ISBN: 978-93-85909-67-2/Year 2018
Size 18 cm × 24 cm/Pages 442
Paperback/₹ 525.00

Tourism: Concepts, Theory and Practice deals with all the fundamental aspects of tourism such as, air transport, travel and hospitality disciplines. It gives an insight into the concept of tourism from different perspectives, various types of tourism, travel motivation and demand, industrial elements of tourism, destination and its elements, various organizations functioning in tourism, planning and development of tourism, and its benefits and impacts. Moreover, various aspects of sustainable tourism, ecotourism and responsible tourism are also included. An introduction to marketing and information technology applications in tourism is also given. The book concludes with a discussion on current status of tourism, contemporary issues in tourism and the future prospects.

Salient Features:

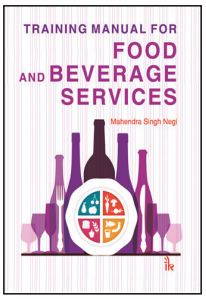
- Discusses planning along with the policy aspects; concepts of tourism product and marketing mix; economy aspects along with multiplier effect; motivation theories in tourism; tourism and transport and their complex relationship.
- Conceptualizes all the major types of tourism, from regional, national and international perspectives.
- Assesses various aspects associated with globalization and its influence on tourism. Examines various statistics/metrics that are measured in the parlance of tourism nationally and internationally and discusses destination as the 'raison d'être' of tourism along with attractions and attractiveness.
- Emphasizes the negative impacts of tourism on society, nature, culture and economy. Analyzes ways to ameliorate the consequences of the haphazard development of tourism.
- Covers topics like sustainable tourism, ecotourism, responsible tourism, and integration of information technology in tourism.
- Uses examples profusely, from organizations in India and the world.
- Includes, along with textual explanations, necessary statistics, graphs and figures.
- Learning outcomes, summary, and keywords in each chapter.
- Sample questions—both short and long answer types—at the end of each chapter.

Contents:

Introduction to Tourism/Tourism Classification/Tourism Motivation and Demand/Tourism Industry/Transport and Tourism/Tourist Destination/Tourism Organizations/National Tourism Organisations: India/Tourism Planning/Benefits of Tourism/Impacts of Tourism/Sustainable Tourism/Ecotourism and Responsible Tourism/Tourism Marketing/Tourism Information Technology/Future of tourism/Index

Audience – Bachelor of Tourism Administration (BTA) and Master of Tourism Administration (MTA).

Training Manual for Food and Beverage Services



Mahendra Singh Negi

ISBN: 978-93-85909-18-4/Year 2017
Size 18 cm × 24 cm/Pages 464
Paperback/₹ 625.00

Training Manual for Food and Beverage Services covers the practical aspects of the food and beverage department (F&B) as required in the hotel industry. It enumerates the food and beverage service techniques and operating procedures in various sub-departments of F&B such as in-room dining, banquets, bars and restaurants. This training manual lays emphasis on the table manners, handling micros, bar set up, beverage services, bar equipment, and cocktails -- elaborating the various cocktail making methods, cocktail recipes along with types of garnishes used in the bar. The manual is not only limited to bar and beverages, but also discusses new upcoming trends in the bar and drinks such as mixology and infusion, along with the role of information technology. With the help of S.O.Ps designed and compiled from various five star hotels it will help students to understand the right procedure of serving food, wine, spirits, cigarettes and cigars to reflect current practices in the industry.

The manual is designed to cater to the needs of the students of degree/diploma courses of hotel management and certificate courses of food craft institutes, and is also suitable for F&B professional and aspiring bartenders.

Salient Features:

- Explains all the standard operating procedures as applicable in five star hotels.
- Includes photographs, images and tables related to food and beverage service procedures to ease the understanding on concerned topics.
- Helps in preparing for placement interviews.
- A detailed restaurant glossary is provided at the end of the book.

Contents:

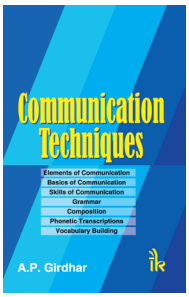
Introduction to Food and Beverage Service Industry/ Food and Beverage Service Personnel/ Restaurant Etiquette/ Restaurant Equipment/ Mise En Place/ Restaurant Preparation/ The Menu/ Types of Service/ Types of Meals/ Food Serving Techniques/ Food and Beverage Service Cycle/ Food Service Sequence for Meals/ Writing a KOT and Billing Methods/ Closing Meal Periods/ Accompaniments/ Table Manners/ Handling Emergency Situations/ Napkin Folding Techniques/ Cheese/ Pastry Counter Set-Up/ Practicing Trolley Service/ In Room Dining/Room Service/ Eat In/ Food Service in IRD/ Functions In Banquet/ Buffet Set-Up/ Fuel Used in Restaurants/ Planning Duty Roster/ Bar Set-Up/ Bar Glassware and Equipment/ Beverage Product Knowledge/ Presenting Beverage Menu/ Service of Fresh Lime/Water/Soda/ Juice/ Service of Tea/ Beer Service Procedure/ Service of Straight Drinks/Spirits/ Introduction to Cocktails/ Service of Cocktails & Mocktails/ Service of Wine (Red & White)/ Service of Champagne/ Sparkling Wine/ Service of Cigars/Cigarette/ Handling Micros/ Fruits, Nuts, Herbs and Spices/ New Trends in Bar/ Restaurant Glossary/ Index

Audience – Students of hotel management and food catering and F&B professionals like restaurateurs, waiters and bartenders, mixologists, airhostesses and stewards etc.

SHOP ONLINE
www.techsarworld.com

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

Communication Techniques



A.P. Girdhar

ISBN: 978-93-82332-24-4/Year 2013
Size 14 cm × 21.5 cm/Pages 280
Paperback/₹ 255.00

This book has been specially designed to explain the fundamentals of the various aspects of communication in the simplest possible language.

The book is divided in two parts. Part one is spread in five units.

The first unit explains the meaning, importance and process of communication. It also explains the objectives of communication, as well as media and types of communication.

The second unit describes verbal and non-verbal communication, formal and informal channels of communication and qualities of good communication.

The third unit explains the barriers to communication, professional communication, interpersonal communication and how to improve it.

The fourth unit discusses important grammatical topics like subject-verb agreement, linking words, relative pronoun. It also includes some common errors with explanation of the rules of grammar to rectify these.

The fifth unit deals with composition, laying particular emphasis on resume writing, writing of business letters, e-mails and telephone etiquettes.

The second part of the book has chapters on phonetic transcriptions and vocabulary building.

Contents:

PART - I / UNIT 1 - ELEMENTS OF COMMUNICATION

Communication: Meaning, Importance and Process/Objectives of Communication/Media and Types of Communication

UNIT 2 - BASICS OF COMMUNICATION

Verbal and Non-verbal Communication/Formal and Informal Channels of Communication/Qualities of Good Communication

UNIT 3 - SKILLS OF COMMUNICATION

Barriers to Communication/Professional Communication/Interpersonal Communication and Methods to Improve it

UNIT 4 - GRAMMAR

Subject – Verb Agreement (Concord)/Linking Words (Conjunctions)/Relative Clauses/Common Errors

UNIT 5 - COMPOSITION

Resume Writing/Business Letter Writing: Sales, Credit, Enquiry, Order, Claim, Complaint, Job Applications/E-mail Messages/Telephone Etiquettes

PART - II (Language Lab)

Phonetic Symbols and Transcriptions/Word Formation/Affixes/Listening and Speaking Skills/Words often Mis-spelt and Mis-pronounced/One Word for Many/Synonyms and Antonyms/Seminar Presentation/Group Discussion/Job Interviews

Audience – B. Tech. and Engineering.

Communicative English-I



A.P. Girdhar

ISBN: 978-93-82332-06-0/Year 2012
Size 14 cm × 21.5 cm/Pages 210
Paperback/₹ 325.00

This book is especially designed for the students of B. Tech. of RTU Kota. It covers the syllabus of Communicative English.

Units 1 and 2 contain a comprehensive discussion items and all major grammatical items and all major forms of writing. Unit 3, 4 and 5 discuss in detail short stories, poems and essays prescribed for the course.

Contents:

UNIT 1- GRAMMAR

Tense/Passive Voice/Reported Speech or Indirect Speech/Conditional Sentences/Modal Verbs

UNIT 2 - COMPOSITION

Dialogue Writing/Paragraph and Précis Writing/Report, its Importance and Report Writing

UNIT 3 - SHORT STORIES

The Luncheon: W.S. Maugham/How Much Land Does a Man Need?: Leo Tolstoy/The Last Leaf: O. Henry

UNIT 4 - ESSAYS

On the Rule of the Road: A. G. Gardiner/The Gandhian Outlook: S. Radhakrishnan/Our Own Civilization: C.E.M. Joad

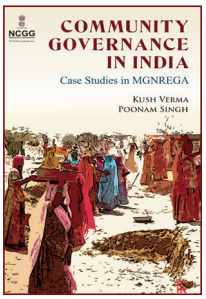
UNIT 5 - POEMS

The Unknown Citizen: W. H. Auden/The Character of A Happy Life: Sir Henry Wotton/No Men are Foreign: James Kirkup/If: Rudyard Kipling

Audience – B. Tech. and Engineering.

Community Governance in India

Case Studies in MGNREGA



Kush Verma • Poonam Singh

ISBN: 978-93-85909-01-6/Year 2016
Size 22.5 cm × 14.5 cm/Pages 432
Hardback/₹ 1295.00

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) aims at enhancing the livelihood security of people in rural areas by guaranteeing 100 days of wage payment in a financial year to those rural households whose adult members volunteer to do unskilled manual work. A vast majority of these individuals are marginal farmers and landless labourers whose incomes are insufficient to support their family. For long, they have been dependent on casual wage works involving migration – seasonal or on a long-term basis. Keeping such section of the population in mind, the MGNREGA was launched in 2006. The Act seeks to create durable assets and strengthen the livelihood resource base of the rural poor. The single major difference between the previous welfare schemes and MGNREGA is that all the previous schemes and programmes were allocation based while MGNREGA is a demand-based programme.

The choice of works suggested in the Act addresses causes of chronic poverty, like drought, deforestation, soil erosion, and so on, so that the process of employment generation is carried out on a sustainable basis. There are numerous examples of such exemplary works being undertaken as a part of this scheme. This volume of case studies is the culmination of an intensive documentation exercise done by a very talented pool of researchers. These case studies have been picked up from various states including Andhra Pradesh, Bihar, Jharkhand, Karnataka, Maharashtra, Rajasthan, Sikkim, Uttarakhand, Uttar Pradesh and West Bengal and serve as representative specimens of how the benefits of the scheme have been leveraged to improvise upon the natural resources and public goods.

Salient Features

- These case studies highlight the importance and significance of good governance in rural perspective.
- The in-depth studies cover a wide range of activities from identification and capturing of onsite work snapshots for creation of durable and productive assets to preparation of labour budget in Gram Sabha with the help of Information and Communication Technology.
- It has brought out some best practices adopted for perfect planning and implementation.
- Different studies have elaborated on the effectiveness of MGNREGA and Rashtriya Swastha Bima Yojana (RSBY) and sanitation schemes.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

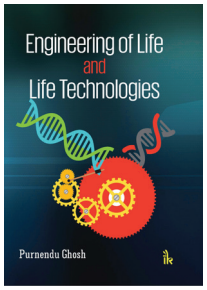
+91-011-43205400
info@ikinternational.com

Contents:

MIS for Tracking of Workers, Works and Funds in Sikkim/ Role of MGNREGA in Disaster Mitigation in Uttarakhand/ Convergence of MGNREGA with Rural Sanitation in Rajasthan/ Impact of MGNREGA on the Migration of Workforce: East Singhbhum, Jharkhand/ Labour Budget – Preparation of Plan: Andhra Pradesh/ Public – Private – PRI – Community Partnership for Sustainable Development – Gulbarga, Karnataka/ NREGS V/S MGNREGA: Maharashtra/ Social Audit and Community Empowerment in West Bengal/ Social Security Schemes: Rashtriya Swasthya Bima Yojana [RSBY] & MGNREGA, Madhya Pradesh/ Electronic Fund Management System (e-FMS), Chhattisgarh/ MGNREGA Wage Rate V/S Market Rate in Haryana/ Shortage of Agriculture Labour: Hoshiarpur, Punjab/ Non Availability of Unskilled Labour in Industry: Gujarat/ Ombudsman: An Effective Tool in MGNREGA: Himachal Pradesh/ Outsourcing in Administration in MGNREGA Gujarat/ gnrega in Tamil Nadu Quality Management: Cost/ Sustainable Livelihood Support – Skill Development To Maintain Assets Created Under MGNREGA/ Vulnerable Groups MGNREGA, Odisha/ Wage Payment Through Bank & Post Office-Financial Inclusion in Gulbarga, Karnataka

Audience – Policy makers, researchers, academicians in rural development, rural governance, social sector development and labour development studies.

Engineering of Life and Life Technologies



Purnendu Ghosh

ISBN: 978-93-84588-47-2/Year 2017
Size 18 cm × 24 cm/Pages 280
Hardback/₹ 625.00

Engineering of Life and Life Technologies is about the future of the most vibrant thing called ';life'. There can't be a better engineering than life itself. In the engineering of life lie answers to many of our ills. Engineering of life plays a leading role in shaping many of our future endeavours in the world of medicine, industry and agriculture. To understand the implications of the future world integration of engineering and biology has become essential. The book is about the implications of biological engineering and biotechnology in the making of a better world.

Salient Features

- An integrated view of science, technology, and society.
- Implications of the future world integration of engineering and biology.
- Implications of biological engineering and biotechnology in the making of a better world.
- Understand the nuances of life from engineering and technology perspectives.

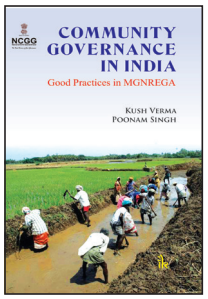
Contents:

Science and the life/Engineering vision and challenges/Engineering of life/Life technologies/Biomedicine/Food biotechnology and the battle of the bulge/Neurobiotechnology and healthy ageing/The future/Index

Audience – Engineering and life science students and general readers.

Community Governance in India

Good Practices in MGNREGA



Kush Verma • Poonam Singh

ISBN: 978-93-85909-31-3/Year 2017
Size 22.5 cm × 14.5 cm/Pages 432
Hardback/₹ 495.00

The good practices captured in this edition cover very significant topics like water harvesting, land development, soil and moisture conservation, and raising plantations. I strongly feel that these good practices should be brought forward through such publications so that the same may inspire many hearts and can be replicated elsewhere. This kind of publication is very much useful for serving the implementing agencies and those who remain engaged in rural development related activities.

The book contains 12 best practices in the MGNREGA Scheme which have emerged as a result of studies carried out in various states, at the village or rural-community level. Each chapter is a case in a best practice which throws light on one particular problem at the site, strategies to overcome it, and implementation status of those strategies. Each chapter also gives out key demographic and geographic data which helps in understanding the extent of impact these best practices have made or are making. Illustrated with lot of diagrams and pictures, this book will be immensely useful to policy makers, researchers, academicians in rural development, rural governance, social sector development, and labour development studies.

Salient Features

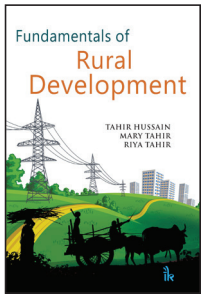
- Twelve hand-picked best practices at diverse community settings, which can be used as a blueprint for replicating at other places in rural India.
- Proper background of every setting has been given to understand the problem in context and therefore arriving at the solution in an appropriate manner.
- Each of the best practices has been discussed in a very structured manner including Methodology, Observations, Stakeholder's Views, Initiators, Findings and Way Forward.
- Sustainability of the MGNREGA Scheme has been kept in the focus, in each of the 12 best practices.

Contents:

Participatory Approach: Shram Shakti Sangha in Andhra Pradesh/ Horticulture Works Under MGNREGA: Good Practice of Sub-Scheme "Nandan Flodhan" in Madhya Pradesh/ MGNREGA in Tamil Nadu – Convergence with Nirmal Bharat Abhiyan/ Convergence of MGNREGA with Watershed Development in Andhra Pradesh/ Convergence of Mahatma Gandhi National Rural Employment Guarantee Act and Mukhyamantri Gram Sadak Yojana in Madhya Pradesh/ Marching Towards a Golden Harvest Well Construction in Deoghar, Jharkhand/ MGNREGA and Bharat Nirman Rajiv Gandhi Seva Kendra in Chhattisgarh/ Construction of Playgrounds in Sikkim under MGNREGA/ MGNREGA: Preparation of Labour Budget through Pali Sabha in Odisha/ Canal Lining with Geo-textiles in Kerala/ Good Governance Including e-Governance and ICT Approaches of Planning and Monitoring Aligarh District, Uttar Pradesh/ Climate Change and MGNREGA – Three-Pond System in Haryana

Audience – Policy makers, researchers, academicians in rural development, rural governance, social sector development and labour development studies.

Fundamentals of Rural Development



Prof. Tahir Hussain
Prof. Mary Tahi
Riya Tahir

ISBN: 978-93-85909-63-4/Year 2017
Size 16 cm × 24 cm/Pages 332
Paperback/₹ 495.00

Fundamentals of Rural Development is a concise yet thorough text which strives to impart a good comprehension of rural development (RD) in India. It presents the theories of RD, structure of rural economy, policy instruments, strategies in poverty alleviation globally, planning issues and programs for implementation, institutional and organizational roles and involvement, and the overall management of rural development. In particular, it emphasizes the pivotal role of human resources as both a means and an end of development.

Salient Features:

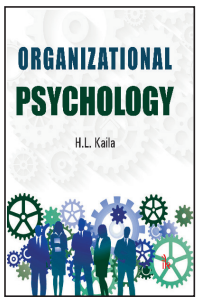
- The chapters exudes all the important aspects and burning topics in RD like sustainability; Human Development Index (HDI) and Millennial Development Goals (MDG); participatory nature of policies; morality, health and hygiene issues; access to finance/ credit; and schemes and policies.
- Develops the concept of rural economy from ground up -- its essential elements, measures and metrics, and the overall current appraisal and management for betterment and uplifting of the rural economy.
- Includes most recently available data like Census 2011 and 12th Five Year Plan (2012-2017).

Contents:

Introduction/ Socio Economic Structure of Rural India/ Development—Measurement and Policy/ Theories of Rural Development/ Global Poverty Alleviation Strategies/ Institutions and Organizations for Rural Development/ Role of Institutions and Organizations in Rural Development/ Linkages between Agricultures and Rural Development / Planning Issues in Agriculture and Rural Development/ Principles and Approach for Development Planning/ Policies and Strategies for Rural Development/ Rural Development in India

Audience – Graduate and postgraduate students of rural development. Social scientists, rural economists, cooperatives and NGO managers, academicians and policy makers.

Organizational Psychology



H.L. Kaila

ISBN: 978-93-84588-73-1/Year 2016
Size 18 cm × 24 cm/Pages 328
Paperback/₹ 455.00

This book presents theoretical background, comprehensive literature review, interviews, case studies, and lot of application exercises on all major topics of Organizational Psychology. The main objective of the book is to help students to acquire knowledge and skills, which they would apply in organizations in their professional careers.

It covers all major topics such as human resource planning, employee recruitment and selection, training and development, employee engagement and organizational commitment, organizational culture, motivation and job satisfaction, work-life balance, leadership and group dynamics, performance management, and employee counselling. The coverage of research methods and statistical techniques is a major highlight of the book. The book is up-to-date and captures all recent researches in this area.

Salient Features:

- The introductory chapter covers the evolution of Organizational Psychology as a discipline and gives a foundational prologue.
- Each chapter contains an interesting "opening story" which sets the tone of the chapter subsequently.
- All chapters contain margin notes annotated as "good to know" features, which will help the students to get a quick reference for the accompanying material.
- Each chapter has well laid out exercises for classroom discussion, practice, undertaking projects and surveys and so on.

This book is targeted at the undergraduate and postgraduate students of Psychology and Management. It will be also useful to researchers, practitioners and academics in Organizational Psychology.

In praise of the book:

"The book on Organizational Psychology authored by Professor (Dr) H.L.Kaila will bridge the gap of long-felt need for students and researchers in the area. It is singularly different from the other academic publications of the area with its distinct focus on applied aspects with updated review of recent researches and studies in the field of industrial and organizational psychology. It will be extremely helpful for students and members of academic community. The examples will enrich readers to apply the learned concepts in practice."

– Dr Abhijit Gangopadhyay
Formerly Professor & Head
Personnel Management & Industrial Relations
Tata Institute of Social Sciences, Mumbai

"In his book, Dr Kaila has cared much to include the theoretical concepts, researches, case studies and applications of organizational psychology which are of much interest and use to not only the students who would study this subject matter in much depth, but also to the practicing managers in organizations. The content coverage is quite wider than the books available currently. The best aspect about this book is 'the research cases based on Indian organizations' included in every chapter of this textbook which is very useful for students."

– Jitendra Mohan
Professor Emeritus of Psychology
Panjab University, Chandigarh

"Dr. Kaila in this book on Organizational Psychology has adopted a very practical approach to make theoretical concepts easy to understand through case studies in Indian perspective. The book written by Dr. Kaila keeping in mind the students is actually also very useful for HR practitioners and anyone having interest in and keen to know all about Industry, Management, Organisation and its psychology. The topics are comprehensive, relevant and generate interest. An Interesting read indeed!",

– Anil Kaushik
Management Expert & Chief Editor
'Business Manager' - HR Magazine, Alwar (Rajasthan).

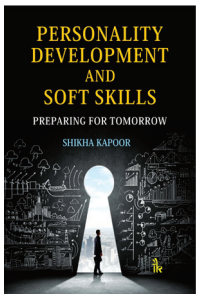
Contents:

An Introduction to Industrial/Organizational Psychology/Research Methods/Human Resource Planning/Management/Employee Recruitment and Selection/Training and Development/Employee Engagement and Organizational Commitment/Organizational Culture and Performance/Motivation and Job Satisfaction/Work-Life Balance/Safety at Workplace/Leadership and Group Dynamics/ Performance Management/Employee Counselling/Statistical Techniques/Index

Audience – BA and MA Psychology, B.Tech (Industrial Psychology), MBA, HR/OB students, researchers in I/O Psychology.

Personality Development and Soft Skills

Preparing for Tomorrow



Shikha Kapoor

ISBN: 978-93-85909-88-7/Year 2018
Size 18 cm × 24 cm/Pages 362
Paperback/₹ 525.00

This book has a strong conceptual and practical framework to help learn about self, build, develop and manage to work in teams for self and organizational growth. It is designed with an objective to identify the needs of the present generation and empower them with the right set of skills to make them employable. With the bunch of soft skills, the book chips in to fill the void between the university curriculum and current industrial needs. The book gives them an inner edge and effectiveness to work with people and excel at workplace.

A guide for honing soft skills by discovering self, it provides strong practical orientation to the students and help them in building and

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improving their skills in communication, business correspondence, presentations, team building, leadership, time management, group discussions, interviews and interpersonal skills. It also helps in career visioning and planning.

Salient Features:

- Features a practical and time-tested learning programme on soft skills to build employment skills quickly.
- Addresses the requirements of honing of soft skills as a necessary part of one's personality.
- Provides several case studies and stories to illustrate the concepts discussed.
- Lays emphasis on personality improvement tests and other exercises to develop one's soft skills.

Contents:

MODULE 1: SELF

Personal effectiveness/Self development/Communication,/Presentation

MODULE 2: GROUP

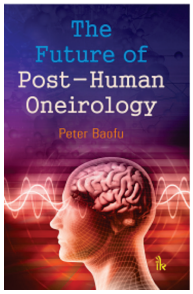
Group behaviour/Team dynamics/Synergy

MODULE 3: ORGANIZATION

Managing change/Creativity in organization/Business communication/ Work Life Success

Audience – Students, job aspirants, professionals and libraries.

The Future of Post-Human Oneirology



Peter Baofu

ISBN: 978-93-84588-88-5/Year 2016
Size 16 cm × 24 cm/Pages 662
Hardback/₹ 4225.00

Are dreams really so non-functional that Owen Flanagan (2001) once suggested that "dreams are evolutionary epiphenomena"? (WK 2014; S. Blackmore 2004). This epiphenomenal view on dreams can be contrasted with an opposing view by Sigmund Freud, who speculatively reinterpreted dreams as the "royal road to the unconscious." (WK 2014)

Contrary to these opposing views (and other ones as will be discussed in the book), oneirology (in relation to illusion and reality in dream analysis) is neither possible (or impossible) nor desirable (or undesirable) to the extent that the respective ideologues (on different sides) would like us to believe. But this questioning of different opposing views on dream analysis does not mean that oneirology is worthless, or that those diverse fields (related to oneirology)—like neurobiology, psychoanalysis, dream analysis, cognitive science, physiology, religion, anthropology, ontology, the art, literature, popular culture, psychiatry, neurology, evolutionary biology, psychotherapy, and so on—should be ignored. (WK 2014) Indeed, neither of these extreme views is plausible.

This book offers an alternative (better) way to understand the future of oneirology in regard to the dialectic relationship between illusin and reality in dream analysis—while learning from different approaches in the literature but without favoring any one of them (nor integrating them, since they are not necessarily compatible with each other). More specifically, this book offers a new theory (that is, *the interperspectival theory of dreams*) to go beyond the existing approaches in a novel way and is organized in four chapters.

This seminal project here will fundamentally change the way that we think about illusion and reality (especially, though not solely, in the context of dream studies), together with other debates as will be discussed in the rest of the book, from the combined perspectives of the mind, nature, society, and culture, with enormous implications for the human future and what I originally called its "post-human" fate.

Contents:

Part One: Introduction

Introduction—The Enigma of Dreams

Part Two: Illusion

Illusion and its Doubleness

Part Three: Reality

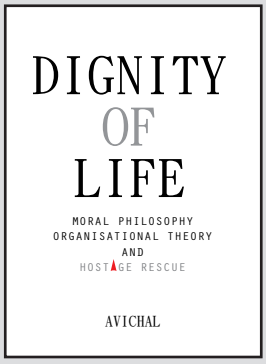
Reality and its Dualness

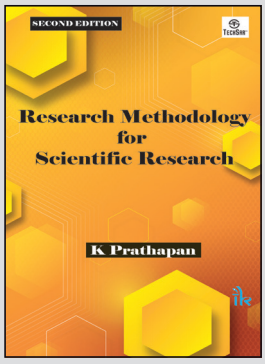
Part Four: Conclusion

Conclusion—The Future of Oneirology

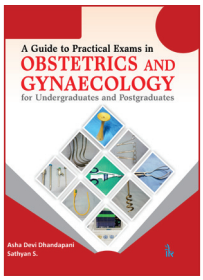
Audience – Researchers in the areas of Oneirology and Psychology.

NEW RELEASES





A Guide to Practical Exams in Obstetrics and Gynaecology for Undergraduates and Postgraduates



Dr Asha Devi Dhandapani
Dr Sathyan S.

ISBN: 978-93-86768-48-3/Year 2021
Size: 18 cm × 24 cm/Pages 316
Paperback/₹ 525.00

This book describes all the instruments that are used in Obstetrics and Gynaecology. The medicines that can be kept in viva and needed for our day-to-day practice, the procedures performed including minor and major ones and knowledge of laparoscope and endoscope too has been covered in the book. Diagrammatic representation and hand-drawn diagrams of surgeries will help readers understand the instruments and procedures in a better way. Separate chapters on Fetal Skull and Maternal Pelvis and Contraception have been covered in the book. The book ends with an introduction of FIGO staging concepts for classification of the malignancies.

Salient Features

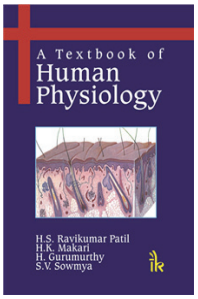
- Detailed description of the instruments used in Obstetrics and Gynaecology.
- Diagrammatic representation of surgeries
- User friendly explanation of procedures with illustrations and use of hand drawn diagram

Contents:

Section-I: Instruments in Obstetrics and Gynaecology/Section-II: Instrumental Delivery/Section-III: Fetal Skull and Maternal Pelvis/ Section-IV: Cardiotocograph/Section-V: Contraception/Section-VI: Medications in Obstetrics and Gynaecology/Section-VII: Procedures in Obstetrics and Gynaecology/Section-VIII: FIGO Staging of Malignancies in Obstetrics and Gynaecology/Index

Audience – Obstetrics & Gynaecology students (MBBS).

A Textbook of Human Physiology



H S Ravi Kumar Patil • H.K. Makari
H. Gurumurthy • S.V. Sowmya

ISBN 978-93-80026-50-3/Year 2010
Size 16 cm × 24 cm/Pages 224
Paperback/₹ 395.00

Human physiology is the science of the mechanical, physical, and biochemical functions of humans. Physiology is the most fascinating and ancient branch of science. It unfolds the mystery of complicated functions of the body system and individual organs in the body. The basic physiological functions include, provision of oxygen and nutrients, removal of metabolites and other waste products, maintenance of blood pressure and body temperature, locomotor functions and sensory functions, reproduction and intellectual functions like learning and memory.

Amply illustrated the book briefly provides all the aspects of Human Physiology.

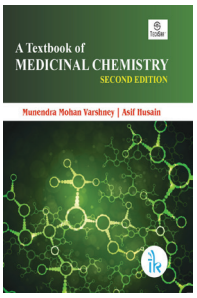
Students pursuing Nursing, Physiotherapy and Biotechnology Engineering courses will find this book very useful.

Contents:

Skeletal System/Nervous System/Respiratory System/ Circulatory System/Endocrine System/Reproductive System/ Digestive System/Excretory System.

Audience – Graduates and postgraduates students in Life Sciences, Allied Sciences including Paramedical, Pharmacy and Biotechnology Engineering.

A Textbook of Medicinal Chemistry 2nd Edition



Munendra Mohan Varshney
Asif Husain

ISBN: 978-93-90620-24-1/Year 2023
Size: 18 cm × 24 cm/Pages 368
Paperback/₹ 525.00

Medicinal chemistry plays an indispensable role in drugs and chemical domain. Advancement and developments in medicinal chemistry have been taking place rapidly. In this new edition of Medicinal Chemistry, the latest developments in the field of medicinal chemistry have been incorporated, and all the important topics, Antibiotics, Quinolones antibacterial, Sulphonamides, Antitubercular agents, Antiviral agents, Antifungal agents, Antiprotozoal agents, Anthelmintic agents and Drug Design have been added.

This book would be valuable to the readers to extend knowledge in respect of several known classes of drug molecules, undergraduate students of pharmacy, and those who have medicinal chemistry as a part of their course curriculum.

Salient Features:

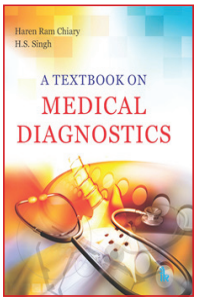
- Detailed coverage of design and developmental aspects of drugs for major common medical conditions along with their mechanisms of action in relation to physiology and anatomy.
- Treatment aspects of medicinal chemistry which include chemical, biological and physical properties of medicinal compounds, synthesizing mechanisms and so on.
- Diagrams of chemical/biochemical structures and schematic flowcharts to illustrate text describing form and processes in medicinal chemistry.
- Fundamentals of quantitative structure activity relationship and heterocyclic chemistry considering its importance in the study of medicinal chemistry.
- End chapter exercises for self-assessment.

Contents:

Physical Chemical Factors and Biological Properties/Autonomic Nervous System Cholinergic Drugs and Adrenergic Agents/ General Anaesthetics/Local Anaesthetics/Sedative and Hypnotics/ Opioid Analgesics/Anticonvulsant Agents/Antiparkinsonism Agents/Central Nervous System Stimulants/Antipsychotic Drugs/Antidepressant Drugs/Antianxiety Drugs/Skeletal Muscle Relaxants/Neuromuscular Blocking Agents/Antibiotics/Quinolones Antibacterials/Sulphonamides/Antitubercular Agents/Antiviral Agents/Antifungal Agents/Antiprotozoal Agents/Antithelmintic Agents/Drug Design/General Considerations of Heterocyclic Chemistry Concept/Index

Audience: B. Pharma
Shelving: Medicine/Pharmacy/ Nursing/ Chemistry & Chemical Science.

A Textbook on Medical Diagnostics



Haren Ram Chiary • H.S. Singh

ISBN: 9789385909788/Year 2019
Size 18 cm × 24 cm/Pages 528
Paperback/₹ 1295.00

Medical diagnostics not only includes its function in serving as supporting evidence but also the techniques and instruments used in medical diagnosis such as ultrasound and

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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X-rays are used as diagnostic tools. This book comprises detailed understanding of fatal and worldwide prevailing diseases such as tuberculosis, diabetes, hypertension, dengue, malaria, etc. Furthermore, through understanding of urine and blood analysis (haematology) are included which are relevant and applicable in the pathology laboratory, hospitals, etc.

The text adequately illustrates the subject matter with the colour plates, line diagrams and specially compiled tables for substantiating important points. Each chapter concludes with the summary of the chapter, respective glossary, relevant questions and references.

The book is designed for the undergraduate and postgraduate students, teachers, laboratory workers. It may also serve as a guide for practising doctors.

Salient Features:

- Accurate, reliable and up-to-date material.
- Colour plates, line diagrams and specially compiled tables.

Contents:

Introduction to medical diagnostics/Statistical analysis and interpretation/Biomedical basis of infectious disease/Infectious protozoan diseases/Lifestyle diseases (non-infectious diseases)/ Urinalysis/Blood analysis/PathologIcal methods: histopathology, haematology and microbiology and important diagnostic techniques.

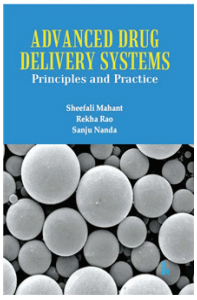
Audience – Undergraduate and postgraduate medical students, practising doctors, and researchers.

Advance Drug Delivery System

Sheefali Mahant
Rekha Rao
Sanju Nanda

ISBN: 978-93-86768-56-8/Year 2020
Size 18 cm × 24 cm/Pages 232
Paperback/₹ 275.00

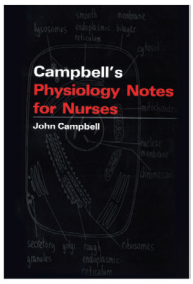
(See on page 306)



Campbell's Physiology Notes for Nurses

John Campbell

ISBN: 978-81-88237-38-8/Year 2005
Size 16 cm × 24 cm/Pages 302
Paperback/₹ 415.00



This friendly text is based on the premise that all nurses need a working knowledge of the normal functioning of the human body. It is only when we understand the normal that the abnormal pathological situation makes any sense. If we can understand how the body goes wrong then it often becomes obvious what needs to be done to treat a disorder. This means physiology and pathophysiology can both be used to inform our clinical interventions and provide us with rationales for care.

John Campbell initially wrote these notes as a guide for his students and because they proved so useful he decided to expand and publish them. The aim has been to keep the text concise but to explain the physiology and necessary basic science in a way that is easy to understand and learn. Diagrams are an important part of this philosophy. When the book was first discussed John thought about getting the diagrams professionally drawn, but rather than do so he decided to draw the diagrams himself, just as he does for his students.

Contents:

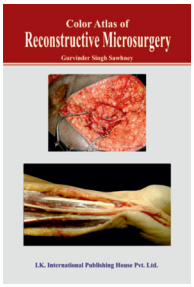
Cells, Tissues and Bodies/The Nervous System/The Endocrine System/The Cardiovascular System/The Lymphatic Ssytem/ Blood/The Respiratory System/The Digestive System/The Urinary System/The Skin/Thermoregulation/The Liver/Inflammation and Immunity/Genetics.

Audience – Students of Nursing and Medical Colleges.
For Sale in Indian Subcontinent only.

Color Atlas of Reconstructive Microsurgery

Gurvinder Singh Sawhney

ISBN: 978-81-88237-73-9/Year 2006
Size 16 cm × 24 cm/Pages 126
Hardback/₹ 1995.00



Contemporary medical strides have taken people to great surprise. Reconstructive medical surgery sees a surgical strategy with the concept of Autogenesis Vascularized Nerve Transfer Systems. A pioneering effort has been taken by the author and we are hopeful that this volume would be of extreme importance to Orthopaedicians, Orthosurgeons and Microsurgeons.

Color Atlas of Reconstructive Microsurgery is an eye-opener to all those treating nerve disorders. The book teaches of surgical strategy and the nitty gritties involved in the correction of disorders through microsurgery. The main objective is on active hip extension and abduction for mobility. Orthopaedicians and students of orthopaedics will find this atlas very useful.

Contents:

Challenges to Nerve Regeneration/Challenges in Axonal Regeneration/ Axon and Neuron/Parameters/Physiology of Muscle Contraction/ Plexus Paralysis Model: Plexopathies/VABBNET - IPMNG 1 GP/ VABBNET - UST - 1 SD/VABBNET - UST - 2 GP /VABBNET - UST - GP Rehabilitation/VABBNET - IPMNG 1 - GP Rehabilitation/ Recovery Pattern/Result Analysis/ Bibliography /Index.

Audience – Students and Practitioners of Orthopedics and Surgery.

Current Trends in Antibiotic Resistance in Infectious Diseases

Asad U. Khan

ISBN: 978-93-80026-70-1/Year 2009
Size 18 cm × 24 cm/Pages 280
Hardback/₹ 995.00



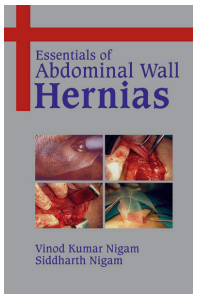
This book contains ten chapters which cover current trends on antibiotic resistance in different parts of the world. Some of the chapters are dedicated to specific type of bacteria like marine and cholera associated microorganisms. Whereas rest of the chapters are mainly focused on the mechanism of drug resistance with special reference to beta lactamases. Since most of the antibiotics used to treat infections belong to Beta-lactam group which is lactam ring (β-lactam) or penam is a lactam with a heteroatomic ring structure, consisting of three carbon atoms and one nitrogen atom. A lactam is a cyclic amide. The main focus of this book is to understand the different molecular markers responsible for developing resistance against this group of antibiotics. CTX-M family of enzyme which hydrolyzes third generation of cephalosporins preferably, cefotaxime, belongs to the category of Extended-spectrum β-lactamases (ESBLs). These types of enzymes are emerging among Gram-negative bacteria; predominantly Klebsiella pneumoniae, Escherichia coli and other species in different parts of the world. In the current scenario, the CTX-M family includes almost 40 variants. The blaTEM, and blaSHV are another important class of β-lactamases, most prevalent among enterobacteriacae which are also discussed in this book.

Contents:

Quorum-Sensing and Multiple Antibiotic Resistance/Genes Encoding Production of Metallo-β-Lactamases in Most Important Gram-Negative Pathogens/Ciprofloxacin Resistance Among Uropathogens/Metallo-β-Lactamase-Producing Klebsiella Pneumoniae/Drug Resistance in Marine Bacteria/An Overview of the Carbapenems with a Focus on Doripenem—The Latest Member of The Carbapenem Class/ Increasing Importance of Newer Beta Lactamases in Indian/ Vancomycin Resistant Staphylococcus Aureus: A Global Threat/ Molecular Epidemiology of Ampc Beta-Lactamases/Cholera and the Acquisition of Antimicrobial Resistance.

Audience – Researchers working in the area of drug resistance.

Essentials of Abdominal Wall Hernias



Vinod Kumar Nigam
Siddharth Nigam

ISBN: 978-81-89866-93-8/Year 2009
Size 18 cm × 25 cm/Pages 462
Hardback/₹ 2495.00

- A concise, comprehensive and up-to-date text on Abdominal Wall Hernias. Over 700 colour diagrams and photographs.
- Covers History-taking, Examination and Investigations.
- Covers all the important aspects of Hernia, i.e., Historical background, Embryology, Anatomy, Operative Procedures, Possible complications and other necessary topics.
- Chapters, "Information Patients need from the Surgeon","Famous International Hernia Centers and Clinics" "Recent Advances and Modern Trends in Hernia Surgery", "Arguments, Controversies, and Discussions in Hernia surgery", "FAQs" and "MCQs" are of immense value to the student as well as practicing surgeon.
- Considerable stress is given to Anatomy, especially in the chapters "Various ligaments in relation to Groin Hernia", "Other Important Structures in Groin" and "Laparoscopic Groin Anatomy".
- Both Open and Laparoscopic procedures for Abdominal Wall Hernias are described with essential steps and diagrams.
- Chapters, "Difficulties in Hernia Surgery", "Important things to remember" and "Statistics of Hernia" are important for the beginner and practising surgeon.

Contents

Section 1 : History • Introduction • Historical background

Section 2: Anatomy • Embryology • Anatomy

Section 3 : Clinical Features • Protective mechanisms against groin hernia • Aetiology of hernia • Classification of abdominal wall hernia • Epidemiology of abdominal wall hernias • Inguinal hernia • Femoralhernia• Umbilical and paraumbilical hernia • Epigastric hernia• Incisional hernia • Divarication of recti • Spigelian hernia • Internal hernia • Recurrent herni • Rare hernias

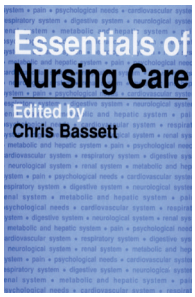
Section 4 : Operative surgery • Operative Surgery

Section 5 : Miscellaneous • Groin hernia "Day Surgery" (Daycare surgery) • Prosthesis for hernia repair • Difficulties in hernia surgery • Important things to remember • Recent advances and modern trends in hernia surgery • Arguments, controversies and discussions in hernia surgery • Surgical hernia audit and hernia registers • Medico legal aspects of hernia • Statistics of hernia • Information patients need from the surgeon • Famous international hernia centres and clinics

- Frequently asked questions (FAQs)
- True or false
- MCQs
- Epilogue.

Audience – M.B.B.S., MS, Surgeons.

Essentials of Nursing Care



Editor

Chris Bassett

ISBN: 978-81-88237-14-2/Year 2004
Size 16 cm × 24 cm/Pages 326
Paperback/₹ 215.00

This text draws together acknowledged experts in their respective fields and, using a very patient-focused approach, provides readers with the concise, practical and readily usable information they need to give the patient tangible and effective care. The book uses a system-based approach to work through the entire body and includes the vital area of psychological care. The final chapter offers guidelines on how to use research to find out more about evidence-based practice and make it part of the future practice of the nurse — a vital requirement for professional nursing practice.

Contents:

The Cardiovascular System/The respiratory System/The Digestive System/The Neurological System/The Renal System/The Metabolic and Hepatic System/Pain/Psychological Needs.

Audience – Nursing coures.

Fundamental Nursing Skills



Editor

Penelope Ann Hilton *t*

ISBN: 978-81-88237-21-0/Year 2004
Size 16 cm × 24 cm/Pages 352
Paperback/₹ 215.00

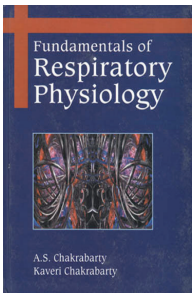
Providing forward-thinking approaches and ideas for nurses of all categories, this reference has been written primarily in response to increasing concerns regarding the perceived lack of ability in both students and newly qualified nurses to perform clinical skills. By outlining the elements of essential nursing procedure in a readily accessible format, including rationale for recommended actions and promoting evidence-based practice, this text encourages the reader to keep a record of achievement in relation to clinical skill competence. The selection of skills included is based on extensive consultation with experienced clinicians, students, clients and teachers of nursing. Each procedure has been carefully researched to provide a contemporary foundation for practice. The text also contains a rapid reference section of common terminology, conversion tables, laboratory results and other useful information.

Contents:

Breathing/Mobilizing/Personal Cleansing and Dressing/ Maintaining a Safe Environment/Communicating/Dying/ Eliminating/Maintaining Body Temperature/Eeating & Drinking/Expressing Sexuality/ Working and Playing/Sleeping.

Audience – Nursing and Medical Students.
For Sale in Indian Subcontinent only.

Fundamentals of Respiratory Physiology



A.S. Chakrabarty
Kaveri Chakrabarty

ISBN: 978-81-88237-70-8/Year 2007
Size 18 cm × 25 cm/Pages 152
Hardback/₹ 615.00

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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Fundamentals of Respiratory Physiology emphasizes on the applied aspects and provides key concepts. Many topics, including mechanism of actions of contractile agonists/beta adrenoceptor/nitric oxide on airway smooth muscle and maintenance of arterial carbon dioxide by oxygen and carbon dioxide dissociation curves have been highlighted. The book is going to be beneficial to both graduate and postgraduate students of Physiology and also students of Respiratory Medicine.

Salient Features:

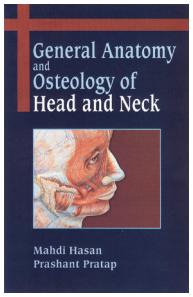
- Up-to-date coverage of respiratory physiology.
- Emphasizes the applied aspects. The clinical applications are highlighted at the appropriate places.
- Emphasizes the basic principles so as to enable students to understand the complex concepts.
- New coverage related to intermittent hypoxia, oxygen homeostasis, feedback control of oxygen supply to the tissues and more has been included.
- Summarizes the text with many illustrations/tables.
- Apart from MBBS students, other students who are preparing for examinations (MD, USMLE) will find the book useful.

Contents:

Structure and Function of the Respiratory System/Respiratory Cycle/ Mechanics of Ventilation/Pulmonary Gas Exchange/Gas Transport in the Blood/Control of Respiration/Respiration under Normal and Abnormal Conditions/Pathophysiology of Certain Respiratory Disorders/References/Index.

Audience – MBBS Students, Candidates Preparing for MD, USMLE Examinations, etc.

General Anatomy and Osteology of
Head and Neck



Mahdi Hasan • Prashant Pratap

ISBN: 978-81-90777-05-6/Year 2009
Size 15 cm × 23 cm/Pages 228
Paperback/₹ 325.00

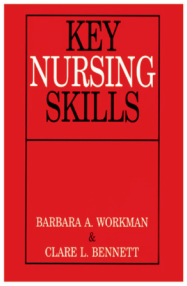
This ready reckoner for students of Dentistry highlights essential anatomy of head and neck with emphasis on clinical application. The supply of all the muscles of head and neck has been condensed in one page with pneumonic aids for remembering the basis. Osteology which is essential for a deep insight into the fundamental gross anatomy, has received special attention. The tables embody large bodies of essential information in a compact form. For identification of histology slides the help of tables seemed logical. In many ways, this book should prove useful for undergraduates in medicine and surgery too. More so, it should also attract aspirants for success in PGME.

Contents:

Scalp/Triangle of the Neck/Infrahyoid Muscles: Ribbon Muscles or Strap Muscles/Suprahyoid Muscles/Muscles of the Eyeball/ Temporomandibular Joint: Craniomandibular Joint/Muscles of Mastication/Paranasal Air Sinuses/Tongue/Pharynx/Larynx/ Parasympathetic Ganglia/Arteries of Head and Neck/Veins of Head and Neck/Craniometry: Anthropometry of the Skull/ Meninges/ Dural Venous Sinuses/Cavernous Sinus/Thyroid Gland/Osteology/ NeNe Supply of Muscles of Head & Neck at a Glance/Parotid Gland/ Submandibular Gland/Articulated Skull/Maxilla/The Frontal Bone/ The Parietal Bone/The Palatine Bone/I nterior of the Skull/Norma Basalis/Norma Lateralis/Norma Occipitalis /Norma Vertical is/The Ethmoid Bone/The Mandible/The Nasal Bones/The Occipital Bone/ The Sphenoid Bone/The Temporal Bones/The Zygomatic Bone/ Histology/Tables for Identification of Cells and Tissues/Index.

Audience – MBBS students.

Key Nursing Skills



Barbara A. Workman • Clare L. Bennett

ISBN: 978-81-88237-20-3/Year 2004
Size 16 cm × 24 cm/Pages 360
Paperback/₹ 215.00

Ideal for nursing students, or for nurses who are training students, this guide focuses on specific areas of nursing care and the skills related to them. It presents interventions that indicate the nature of the patient complaint and the treatment goal, outlines evidence relating to the problem, and explain procedures clearly and simply. Includes tips from experienced nurses.

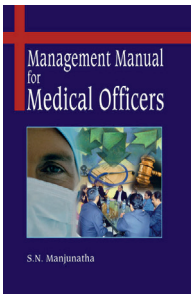
Contents:

Beginning the Assessment Process/Observations/Infection Control/ Personal Hygiene/Preventing the Complications of Bedrest/Drug Administration/Maintaining Fluid Balance/Respiratory Care/ Assisting Patient to Meet Their Nutritional Needs/Elimination/ Aseptic Procedures/Priniciples of Pre- and Post-Operative Care.

Audience – Nursing and Medical Students.

For Sale in Indian Subcontinent only.

Management Manual for Medical Officers



S.N. Manjunatha

ISBN: 978-93-80026-11-4/Year 2009
Size 18 cm × 24 cm/Pages 156
Hardback/₹ 495.00

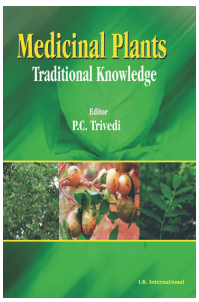
This is a ready reckoner about the managerial functions of Medical Officers. This is a down-to-earth practical manual containing checklist and guidelines to facilitate day-to-day functioning of Medical Officers. This can be used by Medical Officers in public and private sector, paramedical personnel like life workers, nurses, health inspector, etc. This book can also be used for teaching and training purposes in medical colleges and paramedical schools.

Contents:

About the Manual/The Medical Officer and his/Her Department/ General Management of Community Health Centre/Primary Health Centre/Human Resource Management/Financial Management/ Time Management/Material Management/Health Management Information System/Epidemic Prevention, Investigation and Control/ School Health Survey Schedule/Factory Health Survey Schedule/ Medical Officer and the Law.

Audience – Medical colleges and paramedical schools.

Medicinal Plants
Traditional Knowledge



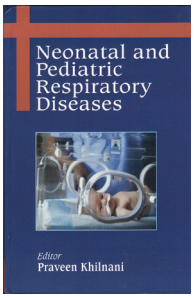
Editor

P.C. Trivedi

ISBN: 978-81-88237-62-3/Year 2006
Size 18 cm × 25 cm/Pages 272
Hardback/₹ 995.00

(See on page 168)

Neonatal and Pediatric Respiratory Diseases



Editor

Praveen Khilnani

ISBN: 978-81-89866-98-3/Year 2009
Size 18 cm × 24 cm/Pages 742
Hardback/₹ 2495.00

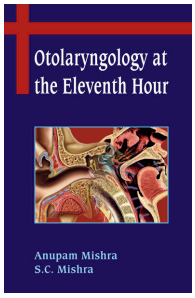
- A current state-of-the-art resource for pediatric residents, pediatricians and physicians involved in the manage-ment of neonatal and pediatric respiratory diseases.
- Up-to-date coverage of respiratory physiology.
- Acute conditions such as respiratory distress and acute respiratory failure detailed including airway management before and during mechanical ventilation.
- Disease specific basic and advanced conventional ventilation, commonly used ventilators, high frequency ventilation discussed in detail.
- Emphasizes the basic principles, so as to enable students to understand the complete concepts.
- Explains the text with illustrations and tables.
- Evidence-based information.

Contents:

Respiratory Physiology/Pulmonary Function Testing/Neonatal Congenital Lung Lesions/Hyaline Membrane Disease/Meconium Aspiration Syndrome/Neonatal Pneumonia/Neonatal Chronic Lung Disease/Congenital and Acquired Disorders of Airway/ Croup, Bacterial Tracheitis, Epiglottitis/Bronchiolitis/Acute Severe Asthma/Extraesophageal Gastroesophageal Reflux Disease (GERD)/ Foreign Bodies in the Airway/Community-Acquired Pneumonia/ Pleural Effusions in Children/Viral Pneumonias/ Empyema Thoracic in Children/Persistent and Recurrent Pneumonias/Nosocomial Pneumonias/Aspiration Pneumonia in Children/Tuberculosis in Children/Suppurative Lung Diseases/ Fungal Infections in Children/Parasitic Infections of the Lungs/ Recent Advances in the Rapid Diagnosis of Respiratory Tract Infection/Cystic Fibrosis/ Pediatric HIV Infections and Respiratory Involvement/Atelectasis in Children/Air Leak Syndromes/ Wegener's Granulomatosis/ Sarcoidosis/Interstitial Lung Diseases in Children/Acute Respiratory Failure/Acute Respiratory Distress Syndrome (ARDS) in Children/ Obstructive Sleep Apnea and Non-invasive Ventilation in Children/ Mechanical Ventilation and Respiratory Care/Weaning from Mechanical Ventilation/Arterial Blood Gas Analysis in Clinical Practice/Oxygen Therapy/ Capnography/Ventilator Graphics and Clinical Applications/ Tracheostomy/Thoracentesis and Chest Tube Placement/ Bronchodilator Therapy in Mechanically Ventilated Children/ Pediatric Thoracoscopy/Rigid and Flexible Bronchoscopy/ Bronchoalveolar Lavage and Transbronchial Biopsy/ Indian Experience with Pediatric Flexible Fiberoptic Bronchoscopy/ Pulmonary Edema/Congenital Heart Defects and Pulmonary Arterial Hypertension in Neonates/Pediatric Heart-Lung Transplantation/ Index.

Audience – M.B.B.S., Pediatricians, Physicians.

Otolaryngology at the Eleventh Hour



Anupam Mishra • S.C. Mishra

ISBN: 978-81-90656-69-6/Year 2009
Size 18 cm × 24 cm/Pages 112
Paperback/₹ 215.00

This book covers the relevant theory pertaining to the practical examination and hence facilitates a student to organize himself readily for the relevant theoretical sections of practical examination in consultation with a standard textbook.

Following are the different aspects dealt with in the book.

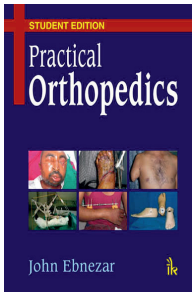
1. Good theoretical knowledge as required for different cases (long and short cases)
2. Ability to recognize the instrument and to know its salient features, indications, methodology of usage, and the specific surgical procedure in which it can be used. The basic details of the main surgical procedures (tonsillectomy, mastoi-dectomy,septoplasty, adenoidectomy, direct laryngoscopy, oesophagoscopy and bronchoscopy).
3. Ability to recognize and read the X-ray plate.
4. Basic knowledge of the surgical specimen especially that of malignancy larynx, polypoidal mass, malignancy maxilla, sinus tract, etc.
5. Clinical case sheet assessment.

Contents:

How to make the best use of this book (a must to read)/Clinical symptoms and causes/Maligenancy head and neck (general principles)/Clinical cases (practical viva)/Differential diagnoses/ Instruments for ENT examinations & operations/Radiology/Tuning fork tests and sample audiograms/Index.

Audience – MBBS and BDS students.

Practical Orthopedics



John Ebnezar

ISBN: 978-93-80026-27-5/Year 2009
Size 21 cm × 28 cm/Pages 548
Hardback/₹ 2495.00

Students Edition:

ISBN: 978-93-80578-37-8/Year 2009
Size 21 cm × 28 cm/Pages 548
Paperback/₹ 1295.00

The presentation in Practical Orthopedics of short and long cases with adequate preferral supplementation, along with discussion of tentative questions which may be asked in the practical examination makes this book unique and highly useful. This book is useful for learning practical aspects of orthopedics.

Salient Features:

- First ever exam-oriented book for students in orthopedics.
- Deals adequately with all aspects of practical orthopedic examination.
- Discussion on classical long and short exam cases.
- Covers all aspects of viva voce examination, namely, typical exam X-rays, instruments and implants, specimen and slides, orthotics and prosthetics, common surgical techniques, spotters and ward rounds etc.
- Useful for DNB students, postgraduate students and under-graduate students taking orthopedic exams.
- Acts as a ready reckoner at the time of examination.
- Tips and suggestions for students to do well in the practical exams during their course too.
- Information about the practical examination format at the national and university levels.
- This book is useful for teachers too.
- This book can be an excellent reference guide for practising orthopedic surgeons.

Contents:

Section-I: Practical Examination Modalities: Exam Cases: Introduction to Long Cases/Long Cases Pertaining to the Hip Joint/ Long Cases of Femur/Long Cases in the Spine/Long Cases Pertaining

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to the Systemic Illness/Miscellaneous Long Cases/Short Cases/Short Cases Pertaining to the Neck/Short Cases Pertaining to the Upper Limbs/Short Cases Pertaining to the Lower Limbs.

Section II: Viva Voce: Viva Voce/Introduction to the exam X-rays/ Trauma Series X-rays of the Upper Limbs/Trauma Series X-ray of the Lower Limbs/Trauma Series X-rays of the Axial Skeleton/Non-traumatic Series Typical X-rays/Instruments and Implants /Splints and Plasters/Traction in Orthopedics/Typical Exam Specimen and Slides/Prosthetics and Orthotics/Spotters/Ward Rounds/Common Orthopedic Surgeries.

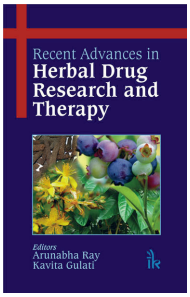
Section III: Tips for Practical Exams: How to Perform in the Practical Exams? Certain Do's and Don'ts/Appendices/Index.

Audience – MBBS students.

Recent Advances in Herbal Drug Research and Therapy

Editors

Arunabha Ray •Kavita Gulati

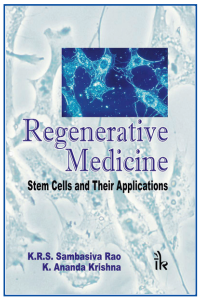


ISBN: 978-93-80026-97-8/Year 2010
Size 16 cm × 24 cm/Pages 480
Hardback/₹ 995.00

(See on page 311)

Regenerative Medicine
Stem Cells and their Applications

K R S Sambasiva Rao
K Ananda Krishna



ISBN: 978-93-80026-60-2/Year 2010
Size 18 cm × 24 cm/Pages 208
Hardback/₹ 895.00

Stem cells (unspecialized cells) have the ability to self-replicate and transform into an array of specialized cells. These cells have two unique properties: self-renewal capacity and the ability to undergo differentiation pathways or enter terminal divisions to yield an organized tissue or functional blood cells. Both embryonic and adult stem cells, therefore, can be used to generate healthy tissues and replace the damaged ones. For instance, they can be used to produce insulin-secreting cells for the treatment of type I diabetes, to generate liver cells for patients with liver failure, to treat neurodegenerative disorders like Alzheimer's and Parkinson's disease, to cure myocardial infarction etc. Thus, we envisage a possibility to restore normal functions with the application of stem cells.

Stem cell research focuses on the potential applications of stem cells. This advancing field of science is making the possibility of cell-based therapies to treat myriad diseases. In the present book, we focus on stem cells and their applications. This book will be useful for students who are interested in the area of regenerative medicine, health sciences and biotechnology.

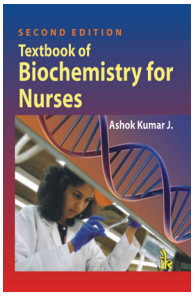
Contents:

Introduction to regenerative medicine/Embryonic stem cells/Adult stem cells/Stem cell transplant: Role of cord blood/Ethical concerns, challenges, recommendations and current regulation of human stem cell research/Cell cycle regulation/Stem cell therapy/Gene therapy and tissue engineering/Techniques in regenerative medicine/ Appendices/Glossary/Index.

Audience – Students of Pharmacy, Medical and Paramedical disciplines.

Textbook of Biochemistry for Nurses
Second Edition

Ashok Kumar J.



ISBN: 978-93-81141-28-1/Year 2011
Size 18 cm × 24 cm/Pages 320
Paperback/₹ 405.00

A sound knowledge of biochemistry is necessary for understanding the pathophysiology of disease, its diagnosis, treatment and follow-up. Since the nursing community works closely in association with clinicians in patient care, it is important for them to be aware of the biochemical aspects of human diseases.

Textbook of Biochemistry for Nurses including nutrition has been designed to cater to the needs of the nursing students. It is an effort to present biochemistry for nurses including certain topics of nutrition in simple and understandable form. This book is useful for B.Sc. nursing, PCBSc nursing students and paramedical courses.

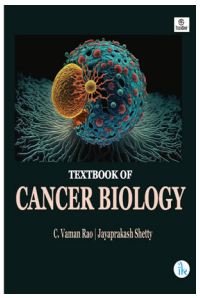
Contents:

Cell and Cell Membrane / Acids, Bases, and Buffers / Chemistry of Proteins / Tissue Proteins / Enzymes / Chemistry of Carbohydrates / Lipids / Digestion and Absorption / Intermediary Metabolism / Carbohydrate Metabolism / Lipid Metabolism / Protein Metabolism / Heme / Immunoglobulins / Nucleic Acids / Protein Biosynthesis / Acid-Base and Water Electrolyte Balance / Renal Function Tests / Specimen Collection / Vitamins / Mineral Metabolism / History of Nutrition; Nutritional Problems in India; National Nutrition Policy; Factors affecting the Nutritional Status / Toxins in Food; Medical Value of Food, Food Adulteration, Food Standards, Cookery Rules and Preservation of Nutrients / Carbohydrates, Lipids, Proteins and Malnutrition / Food Groups; Energy Requirement and Balanced Diet; Dietary Principles in Diseases Condition; Nutritional Education / Appendices / Index

Audience – B.Sc. nursing, PCBSc nursing students and paramedical courses.

Textbook of Cancer Biology

C Vaman Rao
Jayaprakash Shetty

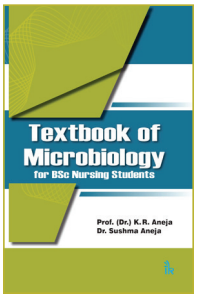


ISBN: 978-93-90620-40-16/2023
Size 18 cm × 24 cm/Pages TBA
Paperback/₹ TBA

(See on page 230)

Textbook of Microbiology for BSc/MSc Nursing Students

Prof. (Dr.) K.R. Aneja
Dr. Sushma Aneja



ISBN: 978-93-90620-59-3/Year 2022
Size 16 cm × 24 cm/Pages792
Paperback/₹ 1225.00

Microbiology is the study of microorganisms that are too small to be seen with the naked eye. Microbiology has proven to be one of the most important disciplines

in biology making it possible to identify how some of the organisms could cause disease, discover how to treat them with antibiotics and even use of some microbes for humans diets and industries.

Microbes keep on evolving to cause new diseases. The most recent pandemic outbreaks of the 21st century have been the 2003 SARS pandemic caused by the coronavirus (SARS-CoV-1) and the current ongoing COVID-19 pandemic caused by another coronavirus, SARS-CoV-2. COVID-19 has significantly changed the world.

This textbook has been structured keeping in mind the students. It provides a solid background of the subject of microbiology. Fascinating images and conceptual diagrams have been used that support the text concisely and provide a clear insight into fundamental concepts and understanding of microbes. A unique feature of the book is that every chapter has key points, important questions and MCQs with answers for quick review. It contains up-to-date information about infectious diseases, their causative agents, treatment and preventive measures including vaccines.

The book would prove to be a treasure for the nurses/nursing students of BSc/MSc, faculty and everyone else interested in medicine.

Spread in 80 chapters under five units covering all aspects of microbiology.

Contents:

UNIT I: Introduction: Principles, historical development of microbiology, and its importance to nursing.

UNIT II: General characteristics, classification and identification of microorganisms.

UNIT III: Methods of infection control and role of a nurse in hospital-acquired infections/nosocomial control programme.

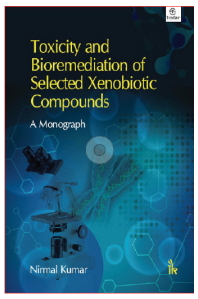
UNIT IV: Disease producing organisms: Bacteria, viruses, fungi, parasites and rodent vectors, and collection of clinical specimens for diagnosis.

UNIT V: Immunity: Concept, types/classification, serological tests, immunization, and immunization/vaccination schedule.

Audience: Nursing graduates & postgraduates

Toxicity and Bioremediation of Selected Xenobiotic Compounds

A Monograph



Dr. Nirmal Kumar

ISBN: 978-93-86768-60-5/Year 2023
Size 18 cm × 24 cm/Pages 348
Hardback/₹ 1995.00

This book evaluates and assesses the toxicity, mode of action of xenobiotic compounds like 2,4-D ethyl ester (herbicide), pencycuron (fungicide), Anthracene (ANT) and Pyrene (PYR) (PAHs) on selected species of microorganism: Cyanobacteria—*Nostoc muscorum Agardh, Anabaena—fertilissima* Rao, and *Synechocystis* sp.; Bacteria—*Bacillus benzoevorans* and Pseudomonas indoxyladons with *Synechocystis* sp. and consortium separately and its biotransformation into nontoxic forms.

The book broadly deals with:

- mode of action of xenobiotics by measuring their toxicity, impact on growth, pigments, biochemical, enzymatic and morphological variations;
- further to understand their toxicity and molecular mechanism, functional group variations by FTIR, change in expression of protein profile by SDS PAGE and genomic DNA profiling by Random Amplified Polymorphic DNA (RAPD) and molecular characterization by 16S rDNA amplification in response to various doses; and
- their biotransformants and reduction of applied xenobiotics compounds during bioremediation process by selected species of cyanobacteria, bacteria and consortium in vitro and ex situ (microcosm).

Salient Features:

- Bioremediation and biodegradation of Xenobiotic compounds—pesticides and PAH's toxicity by Cyanobacteria and bacterial characters.
- Systematic practical design and organization to approach toxicological and bioremediation by Cyanobacteria and bacterial defined artificial consortia.
- Toxicological effects of selected Herbicide—2,4-D ethyl ester, Fungicide—Pencycuron, two model PAHs-Anthracene (ANT), and Pyrene (PYR) on growth, pigments, biochemical, enzymatic, functional groups, molecular and morphological variations.
- Molecular fate, biochemical response and biotransformants during bioremediation by three cyanobacterial species and bacterial define artificial consortia in vitro.
- Role of hydro-geochemical environmental ingredients on bioremediation (bioaugmentation and biostimulation) of PAHs by Bacterial consortia ex situ.

Contents

Introduction to Xenobiotic compounds, Types of Bioremediation and Biodegradation, pesticides and its remediation, PAHs toxicity and remediation, bacteria and cyanobacteria in bioremediation/Practical organization and design to approach toxicological effects of selected Pesticides and model PAHs and Bioremediation by Cyanobacteria and Bacterial defined artificial consortia in vitro studies/Toxicological Effects of Herbicide-2,4-D ethyl ester and Bioremediation by three Cyanobacterial species in vitro/Toxicological Effects of Fungicide – Pencycuron and Bioremediation by three Cyanobacterial species in vitro. Toxicological effects of two model PAHs-Anthracene (ANT) and Pyrene (PYR) and Bioremediation by three Cyanobacteria species-in vitro/Toxicological effects of model PAHs and Bioremediation by Cyanobacterial and Bacterial define artificial consortia in vitro/ Effect of Environmental ingredients on Bioremediation of PAHs by Cyanobacterial and Bacterial consortia- Ex situ.

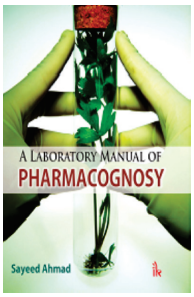
Audience – Graduates, postgraduates, young researchers, scholars and scientists of Life Sciences, Agriculture, Biosciences, Chemistry, Biotechnology, Environmental Science and Engineering, Environmental Biotechnology, Toxicology, Bioremediation, Biodegradation and Biochemistry.

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The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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A Laboratory Manual of Pharmacognosy



Sayeed Ahmad

ISBN: 978-93-84588-89-2/Year 2015
Size 18 cm × 24 cm / Pages 118
Paperback/₹ 315.00

A Laboratory Manual of Pharmacognosy serves as a complete guide to refer as a manual and as well as for recording experiments. This book presents four major chapters supported by 31 experiments, including some introductory experiments to understand the subject. It provides clean and self-explanatory diagrams in transverse section and morphology section. This manual provides an ease to students and faculty to record their observations and results as well as to draw diagrams opposite the figures through proper space given for such experiments.

It is prepared keeping in view the latest Diploma Pharmacy syllabus of Pharmacy Council of India. This book will be useful for students and faculty in Diploma Pharmacy, B Pharmacy as well as UG and PG students of Ayurveda and Unani medicine.

Contents:

General Introduction

To study the structure and working of a simple dissecting microscope and compound microscope/To study about various kinds of microscopic preparations and the steps involved in microscopy

Morphological Identification of Drugs

To perform general chemical tests for identification of Starch and Carbohydrates/To perform chemical tests for Tragacanth and Acacia/To perform general chemical tests for Protein/amino acid and Gelatin/To perform chemical tests for Guar gum and Agar/ To perform general chemical tests for Castor oil and Lipids/fats/fixed oil/To perform chemical tests for Tannins and Catechu/To perform chemical tests for Resins, Asafoetida and Benzoin/To perform general chemical tests for Alkaloids/To perform chemical tests for anthraquinone, saponin, steroidal and triterpenoidal glycosides

Anatomical Studies (Transverse Section)

To prepare and study T.S. of Fennel fruit/To prepare and study T.S. of Coriander fruit/To prepare and study T.S. of Clove/To prepare and study T.S. of Cinnamon bark/To prepare and study T.S. of Cinchona bark/To prepare and study T.S. of Senna leaf/To prepare and study T.S. of Datura leaf/To prepare and study T.S. of Ipecac root/To prepare and study T.S. of Nuxvomica seed/To prepare and study T.S. of Ginger

Morphological Identification of Drugs

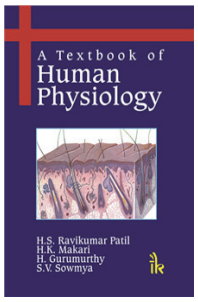
To study the morphology of Ispagula (seed and husk)/To study the morphology of Senna leaf/To study the morphology of the fruits of Coriander and Fennel/To study the morphology of Cardamom and black pepper/To study the morphology of the fruits of Bada-gokharu and Chota-gokharu/To study the morphology of the roots of Ginger and Rauwolfia/To study the morphology of Nutmeg seed and Clove flowering bud/To study the morphology of Ephedra and Punarnava/ To study the morphology of Cinnamon and Cinchona bark

Identification of Fibers

To perform chemical and microscopical examination of fibers used in surgical dressings/Index.

Audience – D Pharm, B Pharm and Pharmaceutical Sciences.

A Textbook of Human Physiology



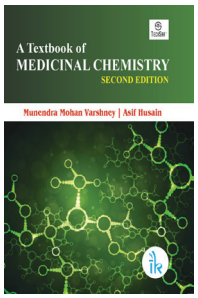
H S Ravi Kumar Patil • H.K. Makari
H. Gurumurthy • S.V. Sowmya

ISBN 978-93-80026-50-3/Year 2010
Size 16 cm × 24 cm/Pages 224
Paperback/₹ 395.00

(See on page 298)

A Textbook of Medicinal Chemistry

2nd Edition

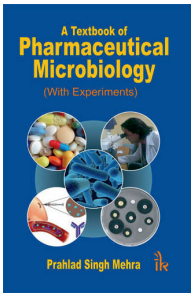


Munendra Mohan Varshney
Asif Husain

ISBN: 978-93-90620-24-1/Year 2023
Size: 18 cm × 24 cm/Pages 368
Paperback/₹ 525.00

(See on page 298)

A Textbook of Pharmaceutical Microbiology



Prahlad Singh Mehra

ISBN: 978-93-81141-11-3/Year 2011
Size 16 cm × 24 cm/Pages 240
Paperback/₹ 365.00

Textbook of Pharmaceutical Microbiology is an attempt to make each chapter independent and self-contained. This book is very important and essential for every pharmacy student because its direct connection with pharmaceutical industry, particularly in manufacture of parenteral products, ophthalmic and vaccines, etc., and their aseptic processing and sterilization.

This book consists of five sections divided into twelve chapters. First section deals with the scope, history and classification of microorganisms. Sections B and C describe the nutrients and isolation of microorganisms, microbial genetics and sterilization techniques. Section D gives the details of basic of immunology and microbial assays and Section E contains experiments.

This book covers the pharmaceutical microbiology curriculum. Accordingly this book serves as a valuable source of information for teachers and students as well as allied professionals.

- This book is especially tailored to B. Pharmacy students written in very simple, brief, lucid language and enriched with clear diagrams.
- Covers essential materials: microorganism structure and their functions, well-defined classifications of microorganisms and microbial genetics.
- Well-defined sterilization processes in laboratory as well as in hospitals and control cross infections in hospitals.
- Every content of the book are explained with diagrammatically.
- In-depth coverage of staining techniques of bacteria.
- Basics of immunology: history, different antibodies classes, antigen-antibody reactions, hypersensitivity reactions, and about the immunological tolerance.
- Well explained gene transfer, replication, transcription and translation processes.
- Focusing mainly the important point which is knowledgeable for the students and other readers.

Contents:

SECTION A: Introduction to Scope of Microbiology/Structure of Bacterial Cell/Classification of Microbes and Their Taxonomy/ Identification of Microbes: Stains and Type of Staining Techniques, Electron Microscopy

SECTION B: Nutrition, Cultivation, Isolation of Bacteria, Actinomycetes, Fungi, Virus, etc./Microbial Genetics and Variation/ Sterility Testing

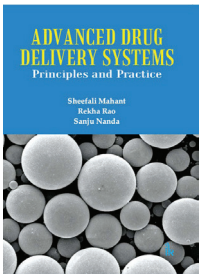
SECTION C: Disinfectants, Antiseptics, and Preservatives/ Sterilization

SECTION D: Immunology/Antimicrobial Assay of Antibiotics, Vitamins and Amino Acids

SECTION E: Experiments/References/Index

Audience – Students of B. Pharmacy, Teachers as well as allied professionals.

Advanced Drug Delivery Systems: Principles And Practice



Sheefali Mahant
Rekha Rao •Sanju Nanda

ISBN: 978-93-86768-56-8/Year 2019
Size: 18 cm × 24 cm/Pages 231
Paperback/₹ 275.00

Advanced Drug Delivery Systems (ADDS) are delivery systems which are based on the principles of novel drug delivery systems and use the latest and most advanced technologies. They are meant to deliver the drug in a controlled or modulated way within the tissue or cells and aimed at safe and effective medication. They help in delivering drug levels in the body by reducing the toxicity and delivering the drug effectively at the desired site of action. The main advantage of ADDS is its versatility and capability to make the drugs more bioavailable. Therapeutic efficacy and safety profile of drugs can be improved by more precise spatial and temporal placement in the body compartment, resulting in reduction in dose frequency.

Divided in eleven chapters, the book broadly deals with:

- advanced drug delivery systems
- preformulation studies
- experimental design
- basic experimental procedures in advanced drug delivery systems
- delivery systems designed for different routes of drug administration

Salient Features:

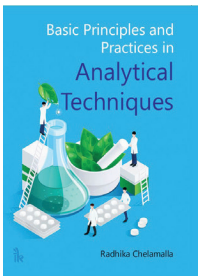
- Caters to the needs of B. Pharm. Final year & M. Pharm. Pharmaceutical/Industrial Pharmacy
- Conforms to the new syllabus prescribed by PCI
- Facilitates practical understanding of novel drug delivery system
- Covers basic, practical and theoretical aspects pertaining to major routes of drug delivery
- Practicals covered in the book can be carried out with basic facilities
- Supplementary information has been provided in the form of appendices.

Contents:

Advanced Drug Delivery Systems/Preformulation Studies: An Essential Tool for Formulation Development/Experimental Design/ Basic Experimental Procedures in Advance Drug Delivery Systems/ Oral Drug Delivery/Buccal Drug Delivery/Transdermal Drug Delivery/Opthalmic Drug Delivery/Nasal Drug Delivery/Vaginal Drug Delivery/Miscellaneous/Appendix/Abbreviations/Index

Audience – Undergraduate and postgraduate students of Pharmacy.

Basic Principles and Practices in Analytical Techniques



Radhika Chelamalla

ISBN: 978-93-86768-62-9/Year 2019
Size: 16 cm × 24 cm/Pages 184
Paperback/₹ 315.00

The present textbook serves the practical requirements of the analysts. This context is mostly helpful for converting theory to practical knowledge. The product quality can be improved all along during manufacturing or in process time, i.e., initially from the raw material to the finished product, during this process the frequent analysis is needed due to which the analytical role has been increased. For this, high skilled analysts like those who have proper analytical knowledge are required. I am sure that it can be attained by knowing about the analytical methodologies mentioned in this handbook.

In recent days it is easy to gain the theoretical knowledge through a number of books and suggestions from teachers but it is little bit hard to apply the same in developing the analytical methodologies which has a prominent role in the development of newer drugs and regular analysis.

The book stands as a firm support to carry out Good Laboratory Practices as it holds the matter about standard operating procedures as well as the calibration of various equipment.

Details about instrumentation and chemical analysis principles are not covered but this contains methodologies which are helpful for the analysis of different dosage forms. The context is provided in simple language and is also explained by appropriate diagrams wherever needed.

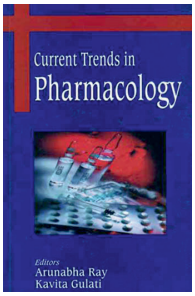
This book will be accepted by the students and also teachers of pharmacy. Hope this brings special interest not only in the subject but also in the field of analysis. Additionally, it also serves to the postgraduates, researchers and also analytical chemists in various departments of pharmacy.

Contents:

Concepts of Dissolution Development/Pharmaceutical Impurities and Degradation of Drug Product/Practical Performance of Analytical Instruments/Procedure for Calibration of Analytical Instruments/ Review on HPLC Method Development/Index

Audience – B.Sc & M.Sc Pharmacy students.

Current Trends in Pharmacology



Editors

Arunabha Ray • Kavita Gulati

ISBN: 978-81-88237-77-7/Year 2007
Size 16 cm × 25 cm/Pages 572
Hardback/₹ 995.00

Current Trends in Pharmacology contains articles on the latest developments in pharmacological research and new drug development. The areas covered range from various current techniques to theoretical concepts in both basic and applied pharmacology and toxicology. The book encapsulates different fields of the subject matter in a clear and comprehensive manner.

The major areas of research range from basic concepts of pre-clinical and clinical pharmacology and toxicology to newer concepts of cellular and molecular pharmacology. Some of the relevant and contemporary areas covered include good clinical practices, adverse drug reactions and pharmacovigilance, rational use of drugs, evaluation of drug safety, good laboratory practices, vitamins and genomic stability, drug interactions, molecular pathways in stroke, bioinformatics and drug design, free radicals and drug toxicity,

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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nitric oxide and the central nervous system, pharmacogenomics and ayurveda, clinical trials with herbal drugs, pesticide induced immunomodulation, etc.

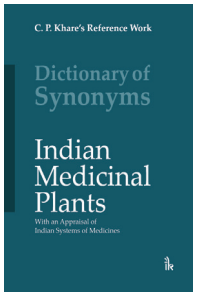
Contents:

Good Clinical Practices/Role of Ethics Committee in Clinical Research/ Bioavailability and Bioequivalence Studies in Drug Development/ Overview of Adverse Drug Reactions and their Monitoring/Idiosyncratic Drug Reactions : Revisited/Promoting Rational Use of Drugs through Drugs and Therapeutics Committees/ Drugs and Therapeutics Committees: From a Pharmacist's Perspective/Evaluation of Drug Safety/Good Laboratory Practices: An Overview/Vitamins and its Genomic Stability in Humans: Redefine the RDA/Involvement of Renin-angiotensin System in the Pathogenesis of Cardiovascular Disease/ Pharmacological Basis of the Action of Antiarrhythmic Drugs/ Experimental Models of Atherosclerosis for the Development of Therapeutic Interventions/ Characteristics and Mechanisms of Cardioprotection due to Ischemic Preconditioning/Pharmacological Treatment of Resistance Vessel Remodeling in Hypertension/Possible Implication of Rho-kinase in Vascular Endothelial Dysfunction/Drug Usage during Percutaneous Coronary Interventions in Patients with Acute Coronary Syndrome and Ventricular Dysfunction/Abdominal Obesity, Low-degree Inflammation and Cardiovascular Diseases in Developing Countries/ Mechanism of Sensory Transduction in Cardiopulmonary Receptors/ Interaction between Aspirin and ACE Inhibitors/Targeting Molecular Pathways in Stroke/Neutrophil Nitric Oxide Synthase : Functional, Biochemical and Molecular Perspectives/Nitric Oxide and the Central Nervous System: Perspectives and Trends/Application of Bioinformatics in Drug Designing in Antimalarial Drug Targets/ Rational Therapy of Tuberculosis Using Fixed-Dose Combination Products: Bioavailability and Stability Issues/Rational Antibiotic Therapy in Hospital-acquired Pneumonia/Tumor Cell Surface Integrins and Metallomatrix Proteinases (MMPs) Cross-talk: A Potential Area for Developing Anti-Metastatic Drugs/Free Radicals and Drug Toxicity: Focus on Theophylline/Search for a Safe, Effective and Specific Treatment for Chronic Arsenic Poisoning/Pesticide-induced Immunomodulation: Influence of Various Factors/Prakriti to Genome: A Journey from Vedic to Genomic Era/Clinical Trials on Herbal Drugs: Limitations and Way Forward/Rational Approach for the Safe Use of Herbal Medicines/Ulcer Protective Effect of Aqueous Extract of Neem (*Azadirachta indica*) Leaf/Index.

Audience – Pharmacologists, Pharmacists, Research Laboratories, Pharma, Students of Pharmacy, Doctors, General Practitioners.

Dictionary of Synonyms Indian Medicinal Plants

Incorporating a Critique on Indian Medicine



C.P. Khare

ISBN: 978-93-81141-24-3/Year 2012
Size 16 cm × 24 cm/Pages 728
Hardback/₹ 1995.00

All the medicinal plants incorporated in "Dictionary of Synonyms: Indian Medicinal Plants" have been studied for their medicinal properties and qualify for further research in modern labs. This work should not be confused with an exhaustive compilation on agro-forestry nor with a detailed document on botany. The purpose is to provide leads to scholars who are well-versed in folk and indigenous nomenclature, but are not able to reach the latest scientific literature, which is being organized by Latin or English names. This work will also serve as a guide to modern scientists who would like to correlate scientific nomenclature with the indigenous one, to understand and make the best use of ground realities for herbal drug development.

In the text, Indian common and folk names have been spelled according to their actual pronunciation.

This reference work, I think, would be useful to all scientists in the field of medicinal plants as well as phytomedicine, to those interested in using Ayurvedic herbs with more confidence in their practice and to physicians and clinicians who are interested in the alternative and adjunctive therapies (excerpt from Foreword).

– Dr. Neeraj Tandon, Head, Medicinal Plant Unit, Indian Council of Medical Research Ministry of Health & Family Welfare, Govt. of India.

The Dictionary is the first reader-friendly, one volume source of properly identified botanical and common English synonyms of Sanskrit, Arabic, Persian, Tamil and folk nomenclature. This will facilitate the globalization process of Indian medicine and lead us to the vast research material of botanical medicine.

– V.K. Agarwal. Ph.D. (Clinical Pharmacology)

The Dictionary reveals the hidden common bonds in Ayurvedic, Unani and Siddha medicines, and removes the stigma of Hindu or Islamic (the epithets were used by even Col. R.N. Chopra) or a geographically divided medicinal system. It will help us in reorganizing our resources for a better coordinated effort

– V.C. Burman Chairman Emiratus, Dabur India

The Dictionary will erase the dividing lines of various Indian classical systems and bring therapeutically validated herbs under one umbrella. One Indian herbal medicine will ultimately emerge. This process has already been initiated by a number of pharmaceutical companies in India, even by those who remained confined to classical formulations for decades.

– Dr. S.K. Mitra, M.D., Former Executive Director, R&D, Himalaya Drug Company

Asiatic Society's markings have now become obscure and obsolete. It is a welcome change that Roman transcription of Sanskrit names is based on the first initiative of Rashtriya Ayurveda Vidyapeeth (National Academy of Ayurveda).

– Dr. V.V. Prasad, M.D (Ayur.), Ph.D., Director, Rashtriya Ayur Vidyapeeth

For the first time, we got correct Roman transcription of Unani names. In almost all reference works, Unani names in English have been misspelt.

Prof. (Hakeem) Anwar Ahmad, Former Head, Unani Medicine, University of Delhi

Herbal drug development critically depends upon the proper botanical identity of Ayurvedic, Unani and Siddha classical herbs. The Dictionary has utilized all possible resources to achieve this.

– Dr. Arun Gupta, M.D.(Pharmacology)

The critical appraisal of Indian systems of medicines is bold, forthright and unbiased to a great extent, at least succeeded in initiating a discussion on many a controversial issue which needed a hard look.

– Dr. Prem Kishore, Former Director, Central Council for Research in Ayurveda & Siddha

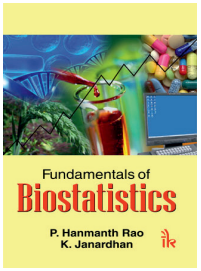
Contents:

Scientific Inquiry into Indian Medicine / An Effort to Modernise the Ayurvedic Classical Concepts / Unani Medicine: Research within Fundamental Framework / Siddha Medicine (Slowly Moving towards Scientific Validation) / Drug Variants of Indian Medicine (Predominantly Classical) / Standardization of Herbal Drugs in India / Improving Shelf-life of Herbal Medicine through Microcosm / Pruning Process of Indian Polyherbal Formulations / Experimental Studies in India (Scientific Edge Over Classical Concepts) / Adverse Effects of Ayurvedic Plant Drugs / Synonyms by Botanical Names / Synonyms by Indian Names / Index.

Audience – Students and scholars in medicine research, Herbal, Ayurvedic, Unani and Siddha systems of medicine and pharmacologists.

Fundamentals of Biostatistics

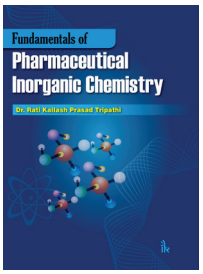
P. Hanmanth Rao • K. Janardhan



ISBN: 978-93-80578-71-2/Year 2011
Size 16 cm × 25 cm/Pages 292
Paperback/₹ 385.00

(See on page 191)

Fundamentals of Pharmaceutical Inorganic Chemistry



Dr. Rati Kailash Prasad Tripathi

ISBN: 978-93-90620-23-4/Year 2021
Size: 18 cm × 24 cm/Pages 342
Paperback/₹ 445.00

Fundamentals of Pharmaceutical Inorganic Chemistry serves as an invaluable source to meet the long-term demand of students of Bachelor of Pharmacy for a standard book on Pharmaceutical Inorganic Chemistry. This book can serve as a stand-alone textbook for an advanced undergraduate or first-year graduate course in pharmaceutical inorganic chemistry. The book aims to enable the students to easily apprehend unfamiliar, unacquainted and apparently complicated concepts of Pharmaceutical Inorganic Chemistry to tackle their confusion especially during the examinations and at the same time to aid to elicit their interest in the subject.

Salient features

- Complete coverage of the syllabus of Pharmaceutical Inorganic Chemistry as per the latest PCI guidelines.
- Extensive information pertaining to inorganic compounds that are of pharmaceutical and medicinal importance is given.
- Neatly presented chemical reactions and labelled diagrams wherever necessary in order to make it more alluring and appealing to our readers.

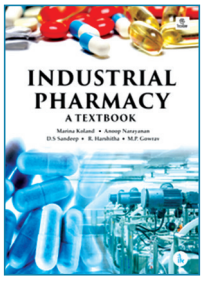
Contents:

Pharmaceutical Chemistry/Acids, Bases and Buffers, Electrolytes and Dental Products/Gastrointestinal Agents/Miscellaneous Compounds /Radio Pharmaceuticals/Appendices/Appendix/1. Reagent Preparations/Appendix 2. Buffer Solutions Used in Pharmacy and Research/Appendix 3. Definitions/Index

Audience – B. Pharma.

Industrial Pharmacy: A Textbook

New



Dr. Marina Koland • Dr. Anoop Narayanan
Dr. D.S Sandeep • R. Harshitha
Dr. M.P. Gowrav

ISBN: 978-93-90620-65-4/Year 2023
Size: 18 cm × 24 cm/Pages 388
Paperback/₹ 595.00

Industrial Pharmacy is the science of manufacturing, development, marketing and distribution of drug products, including quality assurance of the developed drug formulation. This book covers all topics required by students of Pharmacy. Industrial Pharmacy: A textbook is divided into two parts, 'Industrial Pharmacy' Part-I explains the formulation, manufacture, and quality control of tablets, capsules, parenteral dosage forms, liquid orals, ophthalmic dosage form and aerosols. In addition, topics such as 'Pre-formulation', 'Cosmetics' and 'Packaging Material Science' have also been briefly discussed. Part-II has been designed with the objective of imparting knowledge of the pilot plant scaleup considerations of different dosage forms. The students will be able to understand the technology transfer process from R&D to production with the necessary documentation. This book also provides information about drug regulations, roles and responsibilities of drug regulatory requirements such as ANDA and NDA, QMS.

Salient features

- Chapter on 'cosmetics' and 'packaging materials' have been briefly discussed;
- Flowcharts, figures, and tables are included wherever necessary to make the content easy and understandable to the readers;
- Each chapter is provided with 5-6 learning objectives and review questions at the end.

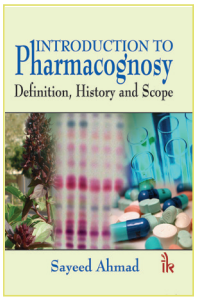
Contents:

1. Preformulation Studies/2. Tablets/3. Tablet Coating/4. Liquid Orals/5. Hard Gelatin Capsules/6. Soft Gelatin Capsules/7. Pellets/8. Parenteral Dosage Forms/9. Ophthalmic Dosage Forms/10. Pharmaceutical Aerosols/11. Cosmetics/12. Packaging Materials Science/13. Pilot Plant Scale-Up Techniques/14. Technology Development and Transfer/15. Regulatory Affairs/16. Quality Management Systems (QMSS)/17. Indian Regulatory Requirements/ Index

Audience – B. Pharm & M.Pharm students

Introduction to Pharmacognosy

Definition, History and Scope



Sayed Ahmad

ISBN: 978-93-80026-48-0/Year 2012
Size 16 cm × 24 cm/Pages 416
Paperback/₹ 505.00

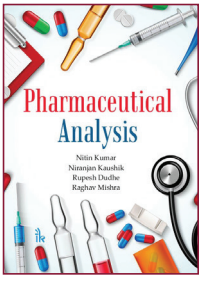
This book provides a comprehensive account on the latest trends and traditional knowledge in Pharmacognosy. While general aspects are dealt with in detail, the systematic treatment and methodical description of plant and its parts in general and some plant families have also been given due attention to understand pharmacognostic terms. The book deals with the theory and practical part, which has been supported with self-explanatory diagrams. The book will be immensely useful to the students pursuing undergraduate courses in Pharmaceutical Sciences.

Contents:

Pharmacognosy/Description of Plants/Indigenous Systems of Medicine: Ayurveda, Homeopathy, Unani and Siddha/Classification of Drugs of Natural Origin/Drug Adulteration, Evaluation and Significance of Pharmacopoeial Standards/Important Plant Constituents (Occurrence, Distribution, Classification, Isolation, Identification Tests and Pharmaceutical Applications/Study of Different Categories of Drugs (Occurrence, Distribution, Classification, Isolation, Identification Tests and Pharmaceutical Applications)/Collection and Preparation of Drugs for Market/ Fibers used in Surgical Dressing and Sutures (Source, Preparation, Identification Test, Chemical Constituents and Uses)/Practicals/ Microscopy/Chemical Tests/Index

Audience – Undergraduate students of Pharmaceutical Sciences.

Pharmaceutical Analysis



Nitin Kumar
Niranjan Kaushik
Rupesh Dudhe
Raghav Mishra

ISBN: 978-93-86768-54-4/Year 2019
Size: 16 cm × 24 cm/Pages 212
Paperback/₹ 265.00

Pharmaceutical analysis is the application of analytical procedures used to determine the purity, safety and quality of drugs and chemicals.

Meant for undergraduate students of Pharmacy, this book emphasizes the basics of pharmaceutical analysis, techniques used in analysis, methods of expressing concentrations, preparation and standardization of various molar and normal solutions, titrations & electrochemical methods of analysis. Recent developments in pharmaceutical analysis have been incorporated.

The titles in this catalogue are for sale only in India and Indian Subcontinent. Price are subject to change without prior notice.

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info@ikinternational.com

Pharmaceutical analysis is used to:

- identify the drug in the formulated product;
- confirm whether the formulation contain solely the active ingredient or additional impurities are presents;
- check the stability of the drug;
- find the rate of drug release from its formulation;
- confirm the identity and purity of pure drug meets specification;
- measure the concentrations of specified impurities; and
- confirm the pKa values, partition coefficients, solubilities.

Salient Features:

- Detailed coverage of various methods of drug analysis including methods of expressing concentration, preparation, standardization of various molar and normal solutions.
- Thorough reportage and current expansion of different titrimetric methods and their applications in pharmacy.
- Meticulous exposure and recent encroachment of diverse electrochemical methods of analysis.
- Diagrams, chemical reactions, structures and schematic flow diagrams to illustrate text and process in pharmaceutical analysis.
- Theory based practicals are given.

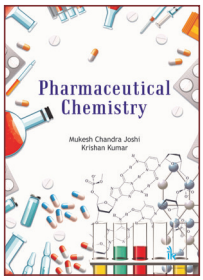
Contents:

Pharmaceutical Analysis/Errors/Pharmacopoeia/Acid-Base Titrations/Non-Aqueous Titrations/Precipitation Titrations/Complexometric Titrations/Gravimetry Analysis/Diazotization Titrations/Redox Titrations/Conductometry/Potentiometry/Polarography/Practicals/Index

Audience – Pharmacy graduate courses.

Pharmaceutical Chemistry

t



Mukesh Chandra Joshi
Krishan Kumar

ISBN: 978-93-86768-42-1/Year 2019
Size: 18 cm × 24 cm/Pages 408
Paperback/₹ 495.00

Pharmaceutical Chemistry has always been an exciting branch of Organic Chemistry particularly correlating the theoretical outcomes with synthetic methods and stability of the molecule designed. Pharmaceutical Chemistry comprises the knowledge of chemical biology, computational chemistry, medical, enzymology and structural biology which is useful for understanding the scientific aspects of the drug discovery programmes of new therapeutic agents. The emphasis is on the chemistry reactions and interactions involved in a drug therapy.

The present book is designed for the undergraduate students pursuing BSc Chemistry, BSc Chemistry (H), BSc (Physical Sciences) and B. Pharma. It covers the complete syllabus related to Pharmaceutical Chemistry including chemical and biological interfaces, and various aspects of pharmaceutical chemistry pertaining to the drugs development. The fundamental aspects of the synthesis, manufacturing, usage, and mode of action of drugs and other biological aspects are dealt with in detail.

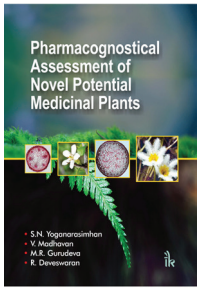
One chapter is dedicated to the medicinal importance of Curcumin, Neem, Vitamin C, Ranitidine, Ginger, Tulsi, Garlic and Ajwain. At the end multiple-choice questions with answers are also given.

Contents:

Drug Discovery, Design and Development/Basic Retrosynthetic Approach/Analgesics, Antipyretic and Anti-Inflammatory Agents/Antibiotic, Antibacterial and Antifungal Agents/Central Nervous System Agents/Cardiovascular Drugs/Anti-Leprosy Drugs/HIV-AIDS: Antiviral Agents/Antimalarial Agents/Fermentation/Medicinal Importance of Curcumin, Neem, Vitamin C, Ranitidine, Ginger, Tulsi, Garlic and Ajwain/Experiments/Multiple-Choice Questions and Answers/Abbreviations/Bibliography/Index

Audience – BSc (Hons.), BSc (Physical Sciences) and Pharmacy students

Pharmacognostical Assessment of Novel Potential Medicinal Plants



S.N. Yoganarasimhan
V. Madhavan
M.R. Gurudeva
R. Deveswaran

ISBN: 978-93-85909-47-4/Year 2017
Size 22 cm × 28 cm/Pages 320
Hardback/₹ 3445.00

World Health Organisation (WHO) stresses the need for total involvement of traditional systems of medicine to meet the goal "Health for All". The Traditional systems of medicine includes several plants/plant parts known as crude drugs which are used in many therapeutic formulations. Pharmacognostical Assessment of Novel Potential Medicinal plants provide pharmacognostical, physicochemical and chromatography details on 22 drugs (covering 27 species) used in Ayurveda/Siddha/Homoeopathy which are useful in the identification of these drugs and also help to establish biomarker compounds. Some taxa like Asparagus gonoclados, Cryptocoryne spiralis, Flickingeria nodosa, Homonoia riparia, Nothosaerva brachiata, Nymphoides hydrophylla, Nymphoides indica, Smilax zeylanica, Triumfetta rhomboidea are dealt with as potential novel alternate sources for the accepted botanical source.

The pharmacognostical features evaluated in this book are useful for the authentication and identification of different species of the medicinal plant/drug. The book will be useful to students and research workers of Pharmacognosy, Ayurveda, Siddha, Botany, herbalists, foresters, natural products, pharmacologists and to all those interested in medicinal plants.

Salient Features:

- Readers will get help in the correct identification of medicinal plants/drugs.
- Provides useful leads for isolation and identification of biomarkers and therapeutically active compounds.
- Outlining the macro- and microscopical characters of the drugs including chemical profiling through chromatography.
- Fulfils the urgent need to explore alternate plant sources for the accepted botanical source of drugs in Ayurveda and Siddha.

Contents:

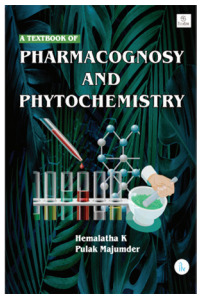
Asparagus gonoclados/Basilicum polystachyon/Capparis sepiaria/Careya arborea/Catunaregam spinosa/Cocculus hirsutus/Colebrookea oppositifolia/Curculigo orchioides/Drosera burmannii/Helicteres isora/Jivanti/Maerua oblongifolia/Ophiorrhiza mungos/Pandanus fascicularis/Pashanabedha/Sankhapushpi/Smilax zeylanica/Streblus asper/Tagara/Toddalia asiatica/Triumfetta rhomboidea/Wrightia tinctoria

Audience – Students and research workers of Pharmacognosy, Ayurveda, Siddha, Botany, herbalists, foresters, natural products, pharmacologists.

New

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A Textbook of Pharmacognosy and Phytochemistry Vol-I



Dr. Hemalatha K
Dr. Pulak Majumder

ISBN: 978-81-95966-27-1/Year 2023
Size 18 cm × 24 cm/Pages 262
Paperback/₹ 445.00

The structural makeup of secondary metabolites and their biosynthetic routes, biological actions, medical, industrial, and commercial uses are all taken into consideration by phytochemistry.

Vol. I of the book covers pharmacognosy, plant tissue culture, traditional and modern medical systems, biological sources, chemical

makeup of medications, and their uses. It also covers the cultivation, gathering, processing, and storage of drugs of natural origin.

For those studying related botanic and phytochemical sciences, this book is a priceless source of information.

Salient Features:

- Precise language and simple narrative for understanding important concepts.
- Updated information in the field of marine drugs.
- Covers essential information such as serological classification, hallucinogenic plant allergens, and plant genetics.
- Extremely concentrated with conceptual information.

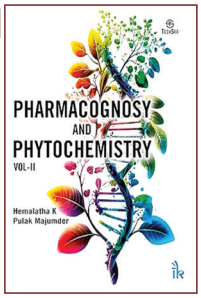
Contents:

1. Preface/2. Introduction to Pharmacognosy/3. Cultivation, Collection, Processing and Storage of Drugs of Natural Origin/4. Plant Tissue Culture/5. Pharmacognosy in Various Systems of Medicine/6. Plant Fibres, Natural Hallucinogens, Teratogens, Natural Allergens, Primary Metabolites, Oils and Fats & Marine Drugs 7. Index

Audience – Students of allied botanic and phytochemical sciences

A Textbook of Pharmacognosy and Phytochemistry Vol-II

New



Dr. Hemalatha K
Dr. Pulak Majumder

ISBN: 978-93-90620-41-8/Year 2023
Size 18 cm × 24 cm/Pages 360
Paperback/₹ 495.00

Pharmacognosy, known initially as Materia Medica, may be defined as the study of crude drugs obtained from plants, animals and mineral kingdom and their constituents. These are also used for treating various diseases, besides, in the cosmetics, textile and food industries. This book covers all the subjects comprehensively that are required by the student of Pharma. Topics like metabolic pathways in higher plants, secondary metabolic, isolation, identification and analysis of phytoconstituents, industrial production, phytochemistry, spectroscopy techniques, chromatography and its applications and electrophoresis.

This book is a precious resource of data for the students of allied botanical and phytochemical sciences.

Salient Features:

- Precise language and simple narrative for understanding important concepts.
- Provide key knowledge on important topics like tracer methods, biosynthetic pathways, methods of extraction, quantification, industrial production of phytoconstituents, chromatography, and spectroscopy.
- Comprehensive coverage of isolation and estimation of phytoconstituents, concepts of phytochemistry and other medicine production in industry.
- Conceptual representation in diagrams for comprehension.

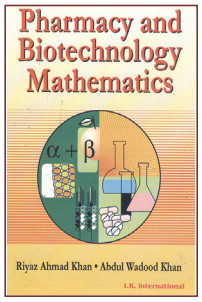
Contents:

Hemalatha K, is Assistant Professor, Acharya and BM Reddy College of Pharmacy, Soladevanahalli, Bengaluru. Karnataka, India, She completed her M. Pharma and PhD from Rajiv Gandhi University of Health Sciences, Bangalore. She has over 18 years of academic experience at both the undergraduate and graduate levels. She has been awarded Darsh Vidya Saraswathi Rashtriya Puraskar's "Best Teacher Award 2021". She has over 40 publications, including reviews and research papers, in national and international journals, as well as two book chapters published by LAMBERT Academic Publications and several certification courses. She has conferred her analysis findings at many national and international conferences. She is a member of pharmaceutical organisations such as IPA, POWER, START HERB and others, as well as a member of the Scientific Editorial Board of several national and international scientific publications. She is now researching herbal formulations and nutraceutical developments for a variety of clinical diseases.

Dr. Pulak Majumder, is as Associate Professor, Sri Adichunchanagiri College of Pharmacy, Adichunchanagiri University, BG Nagar, Karnataka, India He completed his B. Pharm (2007) and M. Pharm (2010) from Rajiv Gandhi University of Health Sciences, Bangalore, PG Diploma in public health from Annamalai University (2015) and PhD from PRIST University, Tamandu, India. He has more than 12 years of academic experience. He has been awarded "Best research scholar" 2019, "Young Scientis Award 2020", "Research Excellence Award, 2020" He is also a Fellow Member (FSASS) of Scholars Academic and Scientific Society since 2021. He has more than 36 review and research papers in repuated national and international journals and authored two books, several book chapters published from Elsevier along with an Indian Patent to his credit. He has represented his research work and attended various national and international conferences. He is a member of various pharmaceutical organizations such as IPA, IFERP, INSc, BOS and faculty of health sciences (Adichunchanagiri University) etc,, and also serving a Scientific Editorial Board Member of various national and international scientific journals. Currently, he is researching on herbal formulation developments for various clinical conditions.

Audience – Students of allied botanic and phytochemical sciences

Pharmacy and Biotechnology Mathematics



Riyaz Ahmad Khan
Abdul Wadood Khan

ISBN: 978-81-90694-28-5/Year 2008
Size 16 cm × 24 cm/Pages 462
Paperback/₹ 445.00

The basic objective of this book is to furnish the reader with the thorough understanding of mathematics topics for B. Pharm. and B. Tech. (Biotechnology) students.

The book explains:

Algebra, Determinant, Matrices/Measures of Central Values/ Trigonometry/Analytical Plain Geometry/Calculus: Differential and Integral Calculus/Curve fitting, Solution of Cubic and Biquadratic Equations.

Salient Features:

- All fundamentals of the topics have been explained with a micro analysis.
- Solved examples of different kinds of problems have been given to make the reader understand the various skills necessary to solve the problems.
- Unsolved exercises of different kinds of problems have been given in a graded style.

Contents:

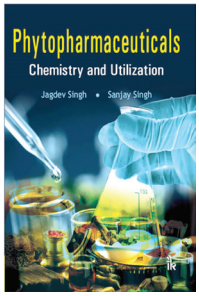
Algebra, Determinant and Matrices/Measures of Central Values/ Trigonometry Analytical Plane Geometry/Calculus/Curve Fitting/ Index.

Audience – Students of B. Pharma. and B. Tech. (Biotechnology).

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Phytopharmaceuticals: Chemistry and Utilization



Jagdev Singh
Sanjay Singh

ISBN: 978-93-86768-43-8/Year 2023
Size 18 cm × 24 cm/Pages 560
Paperback/₹ 995.00

Humans have used plants since time immemorial for cure of diseases and hunting animals. Serutner in 1805 isolated morphine. This was followed by the isolation of quinine in 1820 by Pelletier and Caventou. This formed the base of Phytochemical research. Natural Product Chemistry covers the field of Chromatography, Synthesis, Computer aided drug design and the Phytochemicals from bacterial and marine sources. These all provide lead compounds for synthetic development of medicines. This book includes about 290 phytopharmaceuticals giving their characterization and structure elucidation by modern 13 instrumental methods like UV, IR, HNMR C NMR, Ms, HRMS, X-Ray, biosynthesis and synthesis. The material reported is based on the original work of the researchers reported in various national and international journals.

The book is meant for students pursuing courses in Pharmacy, Organic Chemistry, Science and Life sciences. This book will also be useful for professionals in pharmaceutical industry, research organizations, dealing in natural products in research labs and universities, Ayurvedic research including the development of APIs. It will also be useful as a reference by researchers in natural product chemistry in ICMR units, National Laboratories and pharmaceutical industry.

Salient Features:

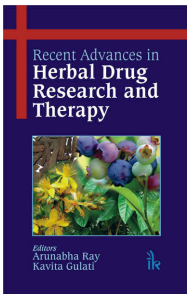
- Data for over 300 pharmaceuticals
- Physical data of each compound
- Synthesis of majority of compounds
- Spectroscopic data for analysis
- Uses of all compounds
- Complete reference of phytopharmaceuticals

Contents:

1. Terpenoids/2. Steroids/3. Flavonoids/4. Alkaloids/5. Proteins and Polypeptides/6. Nucleic Acids/7. Lipoproteins and Amino Acids/8. Vitamins and Other Health Products/9. Antibiotics/10. Lipids/11. Carbohydrates/12. Toxins (Aflatoxins)/13. Marine Agents/Index

Audience – Pharmacy postgraduate students.

Recent Advances in Herbal Drug Research and Therapy



Editors

Arunabha Ray • Kavita Gulati

ISBN: 978-93-80026-97-8/Year 2010
Size 16 cm × 24 cm/Pages 480
Hardback/₹ 995.00

Traditional systems of medicine are fast emerging as viable alternatives to modern medical science. Further, in recent years the emphasis on botanicals as source for drug discovery and development has been realized globally. Added to this, the safer profile of herbal drugs combined with their low costs make them ideal targets for newer drugs. As in the modern system of medicine, viz., allopathy, herbal drugs form an inseparable part of the management of various disorders. The concept of scientific validation of the basis of traditional uses of herbal medicines has given birth to a new concept of reverse pharmacology, and interactions between traditional and modern systems of medicine are being increasingly encouraged. Recent Trends in Herbal Drug Research and Therapy showcases some of these crucial and emerging issues relating to herbal drugs.

This compilation is a judicious combination of research and conventional aspects on the subject of herbal drugs, their pharmacology and therapeutic applications. Some very relevant general and systemic pharmacological as well as toxicological aspects have been highlighted by some of the leading experts in this field. The book will be of interest to students, scientists, teachers and other health professionals in the area of pharmacology, toxicology and allied health sciences.

Spread in 26 chapters the book broadly focuses on:

- Standardization and quality control of herbal drugs
- Regulatory issues like ethics and pharmacovigilance with herbals
- Clinical research with herbal drugs
- Herbogenomics
- Herb-drug interactions
- Potential therapeutics uses of herbal drugs focusing on various systemic disorders of cardiorespiratory, endocrinal, neuropsychiatric gastrointestinal systems and cancer
- Herbal drugs and environmental toxicology

Contents:

Quality Control and Standardisation of Single and Poly Herbal Drugs: Challenges and Opportunities/Ethical Guidelines for Herbal Drugs in India/Meandering Safety of Natural Health Products/ Herbal Drug Research and Therapy-Industry Experience/ Pharmacovigilance of Herbal Remedies/Evidence Based Medicine-A Clinical Experience on Ayurveda Medicine/Herb-drug Interactions: A Matter of Great Concern/Herbogenomics: A New Discipline of Herbal Drug Therapy/Biology of Cardiovascular Disease and Herbal Medicines/ Ocimum sanctum: Its Role in Cardioprotection in Psychological Stress/Resurgence of Herbals for the Treatment of Hypertension/ Advancements in the New Anti-thrombotic Drug Development/ Indigenous Knowledge of Medicinal Plant to New Approach for Drug Development: Revisited/Role of Ayurveda in Respiratory Disorders/Cough: Pharmacological Approaches to a Physiological Response/Newer Insights into the Mechanisms of Action of some Herbal Adaptogens/From Ginkgo biloba to a Neuro-Protective and Psycho-active Drug Lead NV-31/Liver Disorders and Herbal Drug Development/Evaluating the Therapeutic Potential of Natural Products as New Drugs for Peptic Ulcer Disease/From Concept to Reality in Herbal Medicine: Zingiber officinale as Potential Antidiabetic Herbal Drug with Specific 5-Hydroxytryptamine Receptors as the Target/Exploring Plant Materials for Anti-inflammatory and Anti-Leukemic Potential/ Studies on Anti-Tumor Potential of Tea (Camellia sinensis) Polyphenols/Modulation of Radiation Inflicted Tissue Injuries in Swiss Albino Mice by a Semipurified Fraction Prepared from High Altitude Plant Podophyllum Hexandrum/ Terpenes: Penetration Enhancers for Transdermal Drug Delivery/ Arsenic Toxicity: Biochemical Effects, Mechanism of Action and Strategies for the Prevention and Treatment by Chelating Agents and Herbal Extracts/Potential Therapeutic Entities from Plants for Various Ocular Disorders/Index.

Audience – Students, scientists, teachers and other health professionals in the area of pharmacology, toxicology and allied health sciences.

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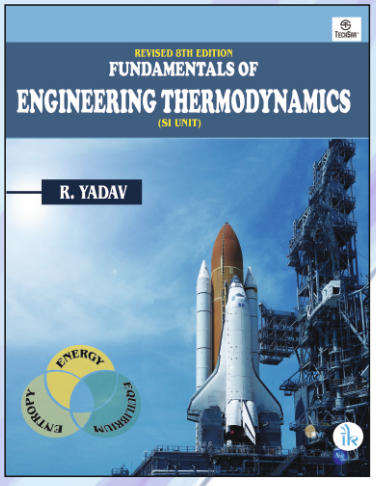
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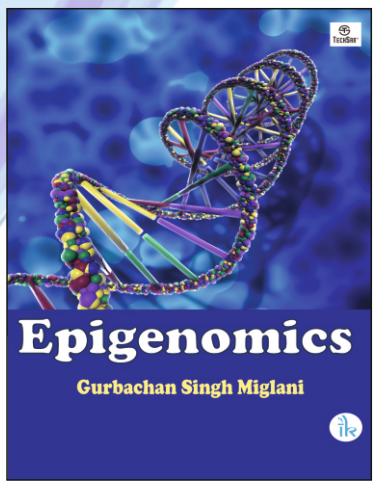
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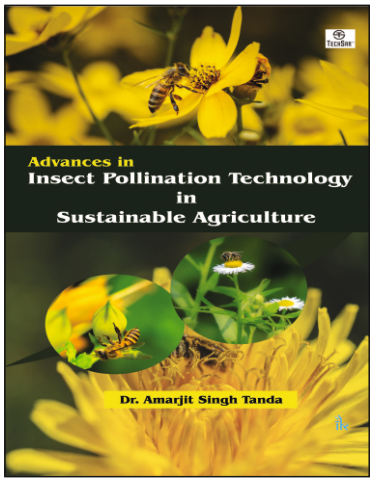
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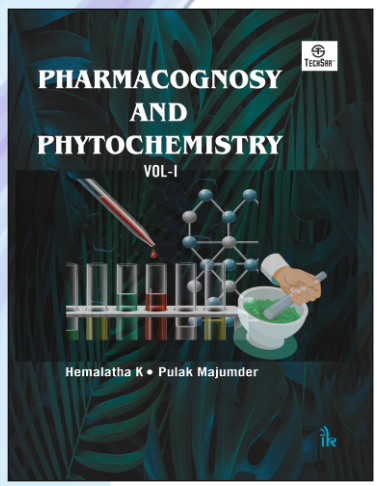
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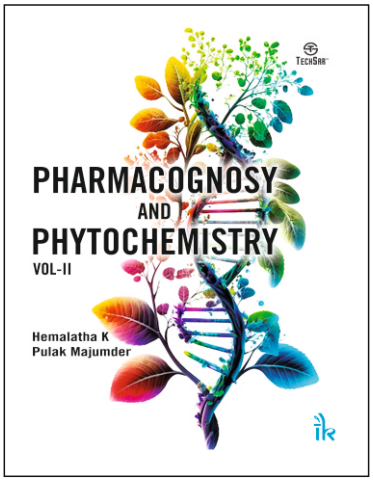
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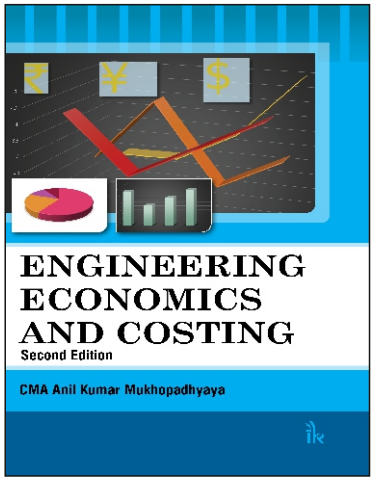


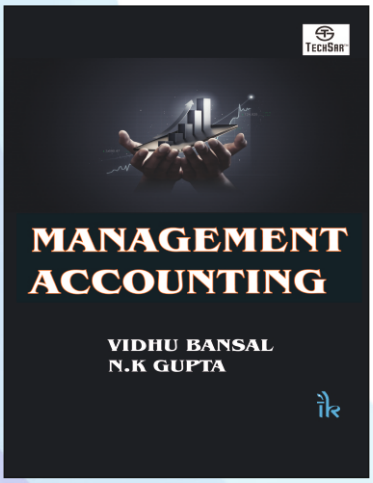


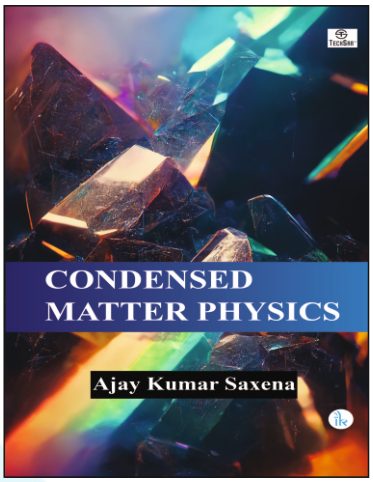


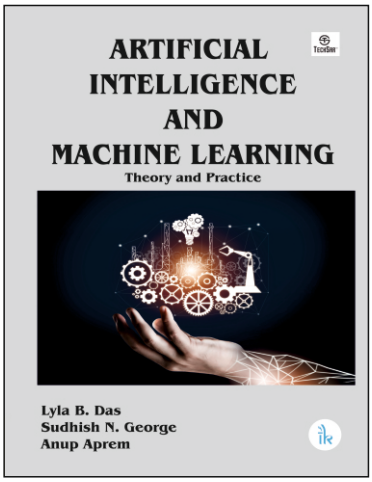












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