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Auditing: Principles and Practice, 2nd ed.
RAVINDER KUMAR, Associate Professor, Department of Commerce and Business Studies, Jamia Millia Islamia, New Delhi.
VIRENDER SHARMA, Fellow Member of the Institute of Chartered Accountants of India (ICAI), is a practising Chartered Accountant.

This comprehensive and well-organized text, now in its Second Edition, continues to provide an in-depth analysis of the fundamental principles of Auditing while emphasizing the practical aspects.

The book discusses in detail, among others, classification and preparation of an audit; internal control system; internal audit, vouching of cash, trading and impersonal ledgers. Besides, it deals with verification and valuation of assets and liabilities; company audit; cost audit; management audit; tax audit; bank audit as well as depreciation. The final chapters of the book give detailed description about business investigations and audit of special entities.

The text also incorporates the latest amendments in auditing made by the Companies (Amendment) Act 2000 and 2002, Companies Auditor’s Report Order (CARO), 2003, and pronouncements by professional bodies.

This edition also incorporates the latest developments in the field of auditing, such as environmental audit, human resource audit, energy audit and social audit.

The book is intended as a text for undergraduate students of commerce as well as those preparing for CA and ICWA examinations.

NEW TO THIS EDITION
• Provides a revised chapter (Ch. 4) on Internal Control System.
• Contains a full chapter (Ch. 5) on Internal Audit.


In this modern world of large-scale business and industry, auditing has become an inevitable function. Auditing is a subject, the function of which is very important from the regulatory, economic and ethical points of view. The subject has undergone radical changes in the current globalised business world.

This book, in the light of latest trends, highlights and explains the principles and practice of auditing and assurance in a simple and an easy-to-understand language. It also presents an up-to-date legal discussion on the subject.

Beginning with an overview of the subject, the text discusses in detail the classification and preparation of an audit, procedures and techniques of auditing, internal control, internal check and internal audit, vouching, verification and valuation of assets and liabilities, and depreciation. Besides, it deals with reserves and provisions, capital and revenue, profits, audit of companies, and classes of investigation. The book concludes with a discussion on accounting and auditing standards, management audit, cost audit, tax audit, government audit and social audit.

The textbook is primarily intended for the undergraduate students of Commerce. It will also be useful to those preparing for CA, ICWA and CS examinations.

KEY FEATURES
• Incorporates latest developments in auditing techniques.
• Discusses latest international & Indian auditing standards.
• Examines the impact of computerisation on audit approach.
• Gives chapter-end questions to test the students’ understanding of the concepts discussed.

Core Banking Solution: Evaluation of Security and Controls, 2nd ed.

M. REVATHY SRIRAM, Managing Director of Tejas Brainware Systems (P) Limited, Chennai.

This compact and concise study provides a clear insight into the concepts of Core Banking Solution (CBS)—a set of software components that offer today’s banking market a robust operational customer database and customer administration. It attempts to make core banking solution familiar to the professionals and regulatory authorities, who are responsible for the control and security of banks, and shows that by using CBS, banking services can be made more customer friendly.

This well-organized text, divided into two parts and five sections, begins (Part I) with the need for core banking solution technology in banking system, its implementation and practice. It then goes on to a detailed discussion on various technology implications of ATM, Internet banking, cash management system and so on. Part I concludes with Business Continuity Planning (BCP) and Disaster Recovery Planning (DRP).

Part II focuses on components of audit approach of a bank where the core banking solution has been in operation. Besides, usage of audit tools and study of audit logs have been discussed.

The Second Edition includes new sections on outsourcing of ATM operations, printing of ATM card, printing of Pin Mailers, mobile banking, Point of Sale (POS), financial inclusion, vulnerability assessment, penetration testing and so on. Besides, many topics have been discussed extensively and updated to make the book more comprehensive and complete.

KEY FEATURES

• Suggested checklists for performing audits are included.
• An exclusive chapter is devoted to Case Studies based on fraudulent activities in banks due to lack of security and controls.
• Useful Web references have been provided.
• Contains relevant standards of international body ISACA, USA.

This book would be useful for the Chartered Accountants who are Auditors of various banks. It would help the External System Auditors and the Auditors who perform concurrent system audit of banks and also the Officers of the Department of Banking Supervision of the Reserve Bank of India and others who have the responsibilities of regulating the security and controls in the banks. In addition, it would be extremely useful to the bankers who have Information Technology as one of the subjects for the CAIIB examination.

This book is a trailblazer in the Indian Banking scene. It makes tremendous and vital contribution to the aspect of Computer Assurance and Risk Management in Banking.

— N. VITTAL, I.A.S. (Retd.), Former Central Vigilance Commissioner

CONTENTS:


Latest Print 2013 / 360 pp. / 16.0 x 24.1 cm
Elements of Banking and Insurance, 2nd ed.

JYOTSNA SETHI, Reader at the Department of Commerce, Jesus and Mary College, New Delhi.

NISHWAN BHATIA, Senior Faculty Member at the Department of Commerce, Jesus and Mary College, New Delhi.

The emergence of the financial sector has brought unprecedented changes in the principles, practices and legal framework of the banking and insurance sectors. This up-to-date and student-friendly text describes, with great clarity and precision, the role of banking and insurance sectors in the current era of globalization, privatization and liberalization.

The book first introduces the readers to the banking business, retail banking, international banking, Internet banking and tele-banking, including the ATMs, credit, debit and smart cards. Then it goes on to give a detailed description of enterprise risk management (ERM), life insurance plans, insurance rating methods and claims settlement in life insurance. The text concludes with a discussion on insurance intermediaries and their functioning, the legal framework, as well as major players in the Indian insurance industry and future trends of the industry.

The second edition has been substantially updated and includes a new chapter on Practical Banking, which discusses cheques, drafts, core banking solution and banking ombudsman.

The text is interspersed with many examples and illustrations, and other pedagogic features. It is designed primarily as a textbook for the undergraduate students (BA) for their course in banking and insurance. Besides, it will prove to be a handy reference for students of management, commerce and those taking banking and insurance courses.


Modern Banking: Theory and Practice, 2nd ed.

D. MURALEEDHARAN, former Head, Department of Commerce, Sree Narayana College, Kollam, Kerala.

Technological innovations and advancements have spread into every sphere of life and banking is no exception. With competition being tough and fierce, business, especially banking, has to adopt new methods and techniques. Modern banking essentially implies use of modern technology and communication tools, for example, computer and the Internet, for bringing about more efficiency and speed in banking operations and making them more and more customer friendly and customer focused.

This accessible and well-written text examines the latest developments in the Indian Financial System and the significant roles the Indian Banking Sector has played in the development of the economy. Thoroughly practical and comprehensive, the book discusses the modern trends in Indian banking, especially its prospects with the use of technology, and other core areas of banking. It covers a wide range of topics such as financial markets and institutions; the role of central banks in different countries, including the role of RBI which is the central bank of India; basic lending principles; methods of remittance; services approach; and micro-credit. Besides, it dwells in details on venture capital, credit rating, modern e-payment systems, core banking, and hi-tech banking.

Now in the Second Edition, the book has been thoroughly revised and updated. This edition includes several new topics, such as local area banks, EXIM Bank (Amendment) Act, 2011, stock invest, Factoring Regulation Act, 2011, prepaid payment instruments, GIRO payment, white label ATMs, tablet banking, recent development in priority sector lending, financial inclusion plan, Micro-finance Institutions (Development and Regulation) Bill, 2012, technology in the banking sector, Basel Committee, global economic trends, KYC, rural infrastructure development fund, licensing of new banks in private sector, gold loans, and shadow banking system.

Intended primarily as a text for the students of Commerce, this student-friendly text should prove to be extremely useful also for the postgraduate students of Management, Finance, and Economics. It should prove equally useful to students of Chartered Accountancy and those appearing in competitive examinations. The book can also be profitably used by practicing managers, bankers, researchers, and all those who would like to acquaint themselves with modern Indian banking, especially the role of banks in the new millennium.


Latest Print 2014 / 476 pp. / 17.8 x 23.5 cm ISBN-978-81-203-5032-8 / 425.00
Intended for undergraduate students of Economics, Commerce and Management, this book discusses the concepts and functions of monetary and banking system. It also incorporates the recent trends and developments in the fields of money and banking. It is written in an easy-to-understand language.

Divided into twenty-seven chapters under two parts. Part I on Money discusses evolution, nature, value, role and significance of money; monetary standards; monetary theories; and analysis of interest rates, inflation and deflation. It also describes trade cycles; money, capital and stock markets; and monetary policy. Part II on Banking discusses evolution, structure and systems of banking, functions, credit creation process, balance sheet, investment policy and nationalization of commercial banks. It describes structure, management, functions and role of SBI and RBI in economic development. Besides, it dwells an India’s lead bank scheme, credit control methods and central banking systems in India, the UK and the USA. The book concludes with a discussion on international financial institutions such as IMF and IBRD.

The text is supported with examples, tables and figures. Chapter-end multiple choice questions and review questions are also provided.

Besides the undergraduate students, this book will also be useful to the postgraduate students of Economics, Commerce and Management.


Latest Print 2013 / 332 pp. / 17.8 x 23.5 cm
V.K. GOYAL, formerly Associate Professor, Shri Ram College of Commerce, University of Delhi, is Professor in Accounting and Finance, and Director at Delhi School of Professional Studies and Research affiliated to Guru Gobind Singh (GGS) Indraprastha University, New Delhi.

RUCHI GOYAL has been a faculty member of Lakshmibai College, University of Delhi.

The Third Edition of this text, which is a thoroughly revised and enlarged version of Prof. V.K. Goyal’s book, Corporate Accounting, Second Edition, gives a clear analysis of the fundamental concepts of corporate accounting.

Accounting for various types of corporations comes under the sphere of corporate accounting. This book primarily deals with the preparation and presentation of accounts strictly in accordance with the provisions of the Indian Company Law. Organized into 11 chapters, this book, at the outset, presents provisions of the Indian Companies Act, 1956, SEBI’s guidelines, and different types of shares and modes for issue of shares. Then it goes on to give a detailed discussion on the conditions for redemption of preference shares with their sources and conversion of preference shares into equity shares. Besides, this text covers, in detail, topics such as different modes of issue of debentures and redemption of debentures, internal and external construction of companies, preparation of cash flow statement and its classification as well as the distinction between cash flow statement and fund flow statement. Finally, the book elaborates on several methods of analysis of financial statements and advantages and limitations of the ratio analysis.

This well-organized and student-friendly book is intended as a text for undergraduate students of commerce.


Latest Print 2013 / 644 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4627-7 / 450.00

Advanced Corporate Finance

CHANDRASEKHAR KRISHNAMURTI, Professor at Faculty of Business, University of Southern Queensland, Australia.

S.R. VISHWANATH, Assistant Professor at Institute of Management Technology (IMT), Nagpur (on leave).

Primarily intended as a text for postgraduate students of management and those pursuing postgraduate courses in finance, this well-organized and deeply researched study explains corporate finance as an area of finance dealing with the financial decisions corporates make and the tools and analyses used to make these decisions. The book discusses the theoretical and practical tools essential to Chief Financial Officer (CFO). It introduces advanced valuation techniques and provides a rigorous understanding of what creates value and why.

Organized into seven parts, Part I of the text provides a rationale for value-based management as the overriding objective of the firm besides highlighting how CFO can increase the value of the firm by fine-tuning financial policies. Part II introduces real options, a new methodology for valuing corporate investments. Part III explores old and new financial instruments, and stresses the objective and methods of active risk management. Part IV examines the structuring, financing, and valuation of large-scale, standalone projects. Part V deals with agency problems, and how finance managers can address these problems using incentives. Part VI reviews some of the most popular restructuring methods and presents empirical evidence on such issues. The concluding part, Part VII, tries to integrate the contents of the book since good corporate governance is essential for effective implementation of policies.

Besides students, practising managers and finance professionals who want to upgrade their knowledge on corporate finance will find the text extremely useful.


Latest Print 2013 / 408 pp. / 16.0 x 24.1 cm ISBN-978-81-203-3611-7 / 350.00
This thoroughly revised and updated edition, with most of the chapters of the previous edition rewritten, clearly analyzes the concepts and applications of financial accounting. The book acquaints the readers with the new International Financial Reporting Standards (IFRS) which are applicable in India from 1 April 2011 onwards.

Divided into 17 chapters, the text explains, with the help of many tables, boxes, and practical examples, all the basic accounting principles. The book is written in an accessible and reader-friendly manner so that the students can comprehend the subject with great ease.

Intended primarily for postgraduate students of management, the book should also be extremely useful for those preparing for accountancy examinations. Besides, practising managers should find the book handy for analyzing financial statements.

NEW TO THIS EDITION

• The text is prepared based on IFRS revised up to 1 September 2010.
• Includes Revised Schedule VI on Profit and Loss Account Format, and an Annexure on Notifications on Revised Schedule VI.
• The book provides a CD containing a large number of PowerPoint Presentations (PPTs), along with the amended Schedule VI.
• The chapters, particularly those covering accounting standards, have been thoroughly revised.


Latest Print 2012 / 712 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4651-2 / ₹ 450.00

KY FEATURES

• Covers concepts and principles of financial accounting in a comprehensive manner.
• Includes 300 worked-out examples to illustrate the concepts discussed.
• Provides 250 unsolved problems in a graded manner for the benefit of students.


Latest Print 2012 / 668 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4626-0 / ₹ 425.00

R. NARAYANASWAMY, Professor of Finance and Control at Indian Institute of Management Bangalore.

This widely adopted, highly acclaimed text, now in its Fifth Edition, has proved to be an invaluable asset to the student community. It explains how to prepare financial statements and analyze and interpret the information from financial statements.

New and Distinctive Features of the Text

Banks: An entirely new chapter (Chapter 13) explains the financial statements of banks. It covers the effect of legal and regulatory requirements on the financial performance of banks.

Spotlight on Earnings Quality Analysis and Earnings Management: Intricate issues in understanding earnings quality and earnings management are explained with real-world examples.

Chapter Vignette: A tone-setting vignette at the start of every chapter enables the student to relate to the key issues covered in the chapter.

Emphasis on Thinking: Accounting involves making significant decisions at every level of management. This text provides many opportunities to students to think about the considerations that go into making accounting judgements.

New Cases: There are new cases on Tata Consultancy Services, Biocon, UBS, Reebok India, Nobles Crus, Essar Oil, HDFC, Kingfisher Airlines, Reliance Communications, and ICICI Bank.

Student-friendly Approach: Ideas are explained in a simple style using everyday language. No prior knowledge of business is assumed. Common doubts in understanding accounting are addressed.

New Material and Updates: New material has been added in many chapters. These include revenue recognition, pro forma financial measures, whistle-blowing, fraudster profile, cloud computing, statement of changes in equity, and management communication. The content has been updated to include the effect of the Companies Act 2013 and changes in Indian accounting standards and International Financial Reporting Standards.

To access learning resources visit www.phindia.com/narayanaswamy5e


Latest Print 2014 / 672 pp. / 21.6 x 27.8 cm SBN-978-81-203-4949-0 / £ 595.00

PHI Learning: Publications
Financial Accounting for Business Managers, 4th ed.

ASISH K. BHATTACHARYYA, Chairman, Riverside Management Academy, and an Advisor (Advanced Studies), The Institute of Cost Accountants of India (ICAI), Kolkata.

Primarily intended for the first course in financial accounting for the postgraduate students of management, this systematically organized text discusses the essential concepts, principles and methods of financial accounting. It covers all important financial concepts and corporate financial reporting practices. The book, in its Fourth Edition, includes Revised Schedule VI on Balance Sheet and Profit & Loss Account Format. The Schedule VI has also been explained at the appropriate places.

While the emphasis throughout is on the fundamentals, the book also skilfully analyzes advanced topics such as financial instruments, earnings management, internal control and internal audit, business combination and the logit model.

KEY FEATURES
• Important concepts are summarized in boxes to facilitate revision and to break the monotony. • Assignments are given in almost all the chapters to provide suitable exercises for better comprehension of the basic concepts. • Answers to quizzes are given at the end of the book. • Includes Case Studies in many chapters. • Contains a comprehensive Glossary at the end of the book. • Discusses financial analysis in detail. • Explains deviations of Indian GAAP from the IAS at appropriate places. • Provides a large number of practical examples to explain concepts and issues. • Incorporates most recent revisions in IAS and AS.

Besides students, practising managers will also find this text to be of immense value.


Latest Print 2012 / 712 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4652-9 / ₹ 475.00

PHI Learning: Publications
BUSINESS AND MANAGEMENT

Accounting / Finance (FINANCIAL ACCOUNTING)

Financial Analysis for Management Decisions

M. SARNGADHARAN, former Professor and Head, and Ex-Dean and Chairman BoS, Faculty of Commerce, University of Kerala, is presently, Director, Conspi Academy of Management Studies (CAMS), Thiruvananthapuram, Kerala.

S. RAJITHA KUMAR, Reader, School of Management Studies, Cochin University of Science and Technology, Kochi.

Intended for undergraduate (B.Com., BBA) and postgraduate (M.Com., MBA) students of Commerce and Management the book presents an in-depth analysis of various tools and techniques that help interpret the financial statements.

At the outset, the book deals with the basic concepts of all the three branches of accounting—financial accounting, cost accounting and management accounting—and explains the meaning of various financial statements such as profit and loss account, balance sheet, statement of retained earnings and statement of changes in financial position. Apart from discussing the tools used for the analysis of financial statements, this text includes discussions on accounting ratios, including ratios for measuring liquidity, solvency, activity and profitability. Besides, the techniques of identifying flow of funds from a transaction, and the preparation and uses of fund flow statement, comparison of fund flow statement with income statement and balance sheet as well as the limitations of fund flow analysis are also described. Finally, this book discusses preparation and uses of cash flow statement based on traditional approach and on Accounting Standard (AS-3).

KEY FEATURES

• Incorporates solved illustrations and unsolved practical problems to help students understand the subject.
• Includes key words at the end of each chapter to clarify the concepts.
• Contains chapter-end exercises for practice.

CONTENTS:

Latest Print 2011 / 364 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4247-7 / 325.00

Financial Policy and Management Accounting, 8th ed.

BHABATOSH BANERJEE, Professor, Department of Commerce, and former Dean, Faculty of Commerce, Social Welfare and Business Management, University of Calcutta, Kolkata.

This well-received book, now in its eighth edition, provides a comprehensive analysis of the fundamental concepts of financial management and management accounting. The elegantly combined presentation of the various aspects of financial management and the topics of management accounting is a highlight of this text.

The extensively revised, updated and reorganised new edition retains the thorough coverage of the various areas of financial management—basic concepts of finance, sources of finance, capital structure theories and planning, dividend policies, investment decisions, portfolio management and working capital management—as well as the areas of management accounting—changes in financial position, budgetary control and standard costing, and cost information and management decisions—provided in the previous editions. It presents, in addition, significant and contemporary topics such as financial environment, corporate governance and international financial management.

Intended primarily for postgraduate students of commerce (MCom) and management (MBA with finance specialisation), the book will also be highly useful for undergraduate students of these disciplines (BCom/BBA), students of professional courses such as CA and ICWA, as well as professionals in the fields of financial management and management accounting.

CONTENTS:

Latest Print 2012 / 1040 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4165-4 / 495.00
BUSINESS AND MANAGEMENT

Accounting / Finance (FINANCIAL MANAGEMENT)

Financial Statement Analysis, 2nd ed.

GOKUL SINHA, former Dean, Faculty of Commerce, Business Management and Social Welfare, and Professor, Department of Commerce, University of Calcutta.

The book, now in its Second Edition, gives a clear and in-depth analysis of financial statements and provides a harmonious blend of concepts and practices as followed by Indian companies.

In this edition, the new format for income statement prescribed in Part II of Schedule VI of the Companies Act, 1956 has been incorporated. Implications of these changes on the analysis and interpretation of the statement have also been discussed.

This textbook is primarily intended for undergraduate and postgraduate students of Commerce and Management. In addition, the book will be immensely useful to financial analysts, bank managers for credit analysis, professional accountants and business executives.

KEY FEATURES
• Provides interpretation of data derived from financial statements.
• Gives an easy method, developed by NCAER, to predict corporate failure.
• Compares firms of different countries and their financial performances.
• Contains more than 172 examples of various types to help students prepare for exams.


Latest Print 2012 / 636 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4660-4 / ₹ 450.00

Financial Statement Analysis and Reporting


Primarily intended for the undergraduate and postgraduate students of commerce and management, this textbook aims to provide an exposition and sound principles for a technique and interpretation of the financial statements of business enterprises. It gives an intensive study on the management structure and reporting, seeking to answer the theme in an easy-to-understand manner.

The book brings into fore the various topics covering income and balance sheet concepts for financial reporting, evaluation of Accounting Standards, objectives, role of reporting in economic development, double entry system, stakeholders’ criteria for decision making and all other areas of financial management.

PEDAGOGICAL FEATURES
• Learning Objectives at the beginning of the chapters
• Marginal Notes for a quick recap
• Systematic discussion of the concepts endowed with illustrations and exhibits
• Summary furnished at the end of the chapters to grasp the contents at the finger tips
• Worked-out examples to develop the analytical and mathematical skills


Latest Print 2011 / 688 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3949-1 / ₹ 425.00
Financial Management is so crucial for any organization—public or private sector—as profit maximization and increasing the shareholder value depend, to a large measure, on efficient and effective financial management of the company or firm. With this end in view, Professor Bhabatosh Banerjee, drawing from his expertise and his rich and long years of experience, gives a masterly analysis of the fundamental principles of financial management along with their applications.

Divided into five parts, the text deals in Part I with the basic concepts, and in Part II with financial and dividend decisions. Part III discusses investing in long-term and short-term assets. Part IV shows how performance analysis and measurement are done, and Part V covers contemporary topics such as portfolio management, mergers and acquisitions, and corporate governance.

**KEY FEATURES**

- Includes numerous illustrations, worked-out problems and exercises covering recent questions in university and professional examinations.
- Gives corporate practices in professional management, wherever found necessary. This will enable the students to acquaint themselves with real-life situations.
- Provides Case Studies to enhance the analytical and presentation skills of the students in a classroom setting.

This book is primarily intended as a text for undergraduate students of Commerce and Management. It will also be highly useful for those appearing at CA and ICWA examinations. In addition, the text will benefit practising professionals in the corporate sector as well as financial management and explains how businesses can formulate strategies to pursue their financial objectives and strengthen their financial position.

The book is divided into five sections. Section I introduces the students to the fundamentals of strategic management and financial management. Section II explains the techniques of portfolio tools, Markowitz modern portfolio theory, capital asset pricing model, factor models and arbitrage pricing theory. Section III discusses investment decision under risk and uncertainty, corporate strategy and high technology investment. Section IV focuses on tools and techniques of analysis and interpretation of financial statements, corporate valuation and value-based management. Section V dwells on contemporary issues in strategic financial management such as corporate restructuring, mergers and acquisitions.

The book is intended as a text for the postgraduate students of management. Besides, students pursuing professional courses such as chartered accountancy, MFC, as well as professionals in the corporate sector will also find the book quite useful.

This compact text presents the basics of accounting and finance using Excel® as a tool for preparing and analyzing Balance Sheets and Profit & Loss Statements. The book also helps in learning the basics of Excel® and different functions it provides to format financial statements.

The second edition of this book emphasizes on accounting ratios that have been explained in detail by using the balance sheet of Ingersoll Rand India Ltd. for the year ending March 2008.

The author uses the balance sheet of Ingersoll Rand India Ltd. to help students relate accounting principles to real-life situations. The topics analyzed include day-to-day problems which managers encounter such as forecasting balance sheets, investments in stock markets, management of receivables and inventory, EMIs, cost of discounting schemes, and designing finance schemes to promote a new product.

The book is accompanied by a CD-ROM which includes balance sheet of Ingersoll Rand India Ltd. and some Excel® worksheets.

This updated edition will be useful primarily to post-graduate students pursuing courses in management and commerce disciplines. It will also be of help to professionals indulged in model-building and developing a decision support system on Excel® worksheets.


PHI Learning: Publications

HRISHIKES BHATTACHARYA has been Professor of Finance and Control at the Indian Institute of Management Calcutta. He has also been Director of United Bank of India and UNDP Fellow on International Financial Management at Wharton School, University of Pennsylvania.

Working capital is commonly understood as the fund needed to meet the day-to-day expenses of an enterprise. A finance manager finds that the funds for meeting these expenses get blocked in current assets. He therefore, looks for liquidity support in net working capital (NWC), which is equivalent to the excess of current assets over current liabilities. A banker also looks at the size of NWC as the long-term stake of the business in funding the current assets. But for a production manager, liquidity is synonymous to uninterrupted supply of material inputs to the production lines. Similarly for a marketing manager, if there is no production, his marketing outlets dry up despite demand in the market. While the finance manager discourages overstocking of inventory, the production manager and the marketing manager dread of being out of stock. In this conflict the goal of the organization often takes a back seat. This book aims at resolving these conflicts by adopting a techno-financial approach to working capital management.

In the Third Edition a full chapter on Service Business: Risk Analysis and Working Capital Assessment has been incorporated, which is devoted to understand the nature of service business and the risks associated with it. It is followed by developing a model for assessment of working capital requirement of a service enterprise. Besides, the book is revised and updated extensively by incorporating the current researches in the field; particular mention can be made of Cash Pooling system, Bullwhip effect and newer approaches to inventory recording system.

Throughout the book, every concept is presented with worked-out examples and case studies for easy comprehension of the subject.

The book is primarily addressed to postgraduate students majoring in Finance and to those pursuing professional courses in Accounts (CA) and Cost Accounting (ICWA). The book will also be very useful to practising finance managers as well as to purchase/materials managers.


Latest Print 2012 / 268 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-3918-7 / 295.00

Latest Print 2014 / 576 pp. / 16.0 x 24.1 cm
BUSINESS AND MANAGEMENT
Accounting / Finance (FINANCIAL SERVICES)

Financial Services

SANDEEP GOEL, Assistant Professor (Finance), Management Development Institute, Gurgaon, is PhD in Accounting from Faculty of Management Studies (FMS), Delhi University.

In view of the importance of financial services worldwide, the present book is an attempt to fulfill the needs of this course prescribed by business schools in India. The book targets postgraduate and undergraduate students of management and commerce. Besides, it will also be useful for the practising managers. The book fosters a clear understanding of the concepts and practices of various financial services in India and also discusses emerging issues and challenges of this sector in the present scenario. It covers various financial services from banking and insurance to mutual funds and leasing services. Various pedagogical tools such as illustrations, tables, figures and case studies have been used to give a vivid visual impact and relate concepts to real-life situations.


Latest Print 2011 / 216 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4445-7 / 225.00

Fundamentals of Life Insurance: Theories and Applications

KANINIKA MISHRA, Chief Consultant, Code Content Design Services, Noida. As a founder member, Max New York Life, New Delhi.

Human life, in all its manifestations, has immeasurable social and economic value. Since ancient times, human beings have tried to put in place systems to sustain and flourish in the face of adversity. In modern times, life insurance is one such financial arrangement that provides social and economic security to individuals and to the communities.

Divided into three sections, this book comprehensively dwells onto the basics of life insurance, risk management and health and micro insurance, in detail. Section I (Concepts, Principles and Processes) systematically defines life insurance, its legal contract and characteristics, the marketing and distribution processes involved, and the future trends. Section II (Risk Management, Underwriting, Reinsurance and Claims) explicates the importance of risk management, the process of underwriting and types and the concepts of reinsurance and claims. Section III (Group Products, Pensions and Annuities) accounts for various group insurance and retirement products, apart from briefing on the individual pension and annuity plans.

Besides, it also teaches the method to calculate the premium charged, which is based on the amount of risk involved among various policyholders who follow diverse lifestyles.

Primarily intended for the students of MBA (Insurance) and BA (Banking and Insurance) this book will also be beneficial for the postgraduate students of commerce, for a course in Insurance.


Latest Print 2009 / 220 / 17.8 × 23.5 cm
ISBN-978-81-203-3925-5 / 175.00

PHI Learning: Publications
BUSINESS AND MANAGEMENT
Accounting / Finance (FINANCIAL SERVICES)

Investment Management

YOGESH MAHESHWARI, Professor, Finance and Accounting, Indian Institute of Management Indore.

This book, specifically designed for the postgraduate students of management, finance and commerce for the course in Investment Management or Security Analysis and Portfolio Management, provides a thorough understanding of the concepts and methodologies of investment management. It begins with a sound theoretical introduction to the basic concepts of savings, investments, risk and return, portfolio and financial markets. The text then systematically explains the wide gamut of investment alternatives available to an investor and elucidates the investment markets and processes as prevalent in India.

What distinguishes the text is that it emphasizes the practical aspects of the subject. In so doing, the book provides an extensive coverage of the tools and techniques of technical analysis and a meticulous treatment of security analysis. This is closely followed by an exclusive chapter on portfolio management which encompasses all the aspects of the selection, maintenance, evaluation and revision of portfolios. The book concludes with an overview of the regulatory environment of investments.

KEY FEATURES
- Explains the concepts and processes in the Indian context, thus enabling the students to know the markets and investment procedures in India.
- Focuses on the practical aspects to help students start investing even while they are doing the course.
- Provides questions at ends of chapters to drill the students in self-study.

Besides postgraduate students of management and commerce, senior undergraduate students of these courses as well as practising managers should find the book extremely useful.


Latest Print 2011 / 332 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3426-7 / 295.00

Managing Life Insurance

SHASHIDHARAN K. KUTTY, Deputy Director, Banking, Finance and Insurance at AICAR Business School.

Today, the insurance sector has opened up, and a lot of new players, both multinationals and Indian companies with foreign collaboration, have entered this arena realizing the vast potential in life insurance. A basic knowledge of life insurance has therefore become essential for the students opting for this course as well as for the practitioners. With this view in mind, Dr. Kutty gives in this text a masterly analysis and a holistic view of every dimension of life insurance management in the sequence of 6Ps—purpose, principles, purchase, products, process and people, in an easy to understand language. He strives to demystify the complex world of life insurance and present its fundamentals to all the readers.

Based on the author’s rich experience in insurance sector over the two decades, the text provides new research insights in the areas such as product comparisons, e.g. portfolio approach to purchase of life insurance. It covers the actuarial dimensions of life insurance, with the minimum use of mathematics. Besides, the text discusses in detail the two core operations of an insurance company—underwriting and claims. The hallmark of this book is its attempt to transform the way marketing and operations in life insurance are approached and its sure guidance on how a professional should approach and manage sales, service, process and people.

This book is primarily designed for students of management, commerce and those pursuing specific insurance courses. It can also be profitably used by industry practitioners. Finally, the book will be invaluable to managers of Life Insurance companies, Banks (engaged in Bancassurance), and Security firms.


Latest Print 2008 / 724 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3531-8 / 375.00
Humans are accustomed to risks. Be it a theft or burglary, a fatal road accident, natural disaster or death—the possibility of a person encountering a risk, can never be underestimated. To mitigate the intensity of risks, it is always advisable to manage risks beforehand. This book explains how to minimize, monitor, and control the probability and impact of unfortunate events, through risk management. The chapters are skillfully designed to give a comprehensive approach to the need of insurance; the right plan for different needs; and the right place to buy the insurance. The essential concepts are dealt with thoroughly to build the foundation of the subject.

The book skillfully elucidates the roles and the duties of an Agent, and the traits required to transform into an efficient one. It highlights some of the most important insurance claims, which are only prevalent in the developed countries (US and UK), like tort liability problems, long-term care insurance, personal umbrella insurance and Uninsured Motorist Coverage and personal umbrella policy. The book emphasizes on exposures to mortality, health, disability, auto, overseas and travel insurances. While discussing the topics, like retirement options, it ornately describes various pensions and annuity schemes available as well.

The book is primarily intended for the postgraduate students of Management. However, it will also be beneficial for Risk Managers, and Insurance Agents.

KEY FEATURES

• The chapters are interspersed with Figures, Tables, Exhibits and Takeaway Tips to provide interesting facts related to the topic discussed in the chapter.
• The topics are explained through case studies, and graphical representations, to add a practical approach to the subject.
• MCQs help in strengthening life insurance concepts.
• A separate Chapter is devoted to the Insurance Laws.


The second edition of this well-received book is fully updated to equip students with international accounting standards, regulations and financial reporting.

Written in sync with the changing accounting practices the world over, this text provides comprehensive coverage of the core concepts of international accounting and their applications, with detailed discussion on international financial management which has gained importance over recent years due to globalization and liberalization.

The text also traces the genesis of international accounting, and discusses at length topics such as foreign currency translation, consolidation of foreign financial statements, transfer pricing, international taxation and financial reporting practices in leading countries such as USA, UK, Canada and Germany.

Intended primarily as a text for the postgraduate students of financial studies such as MFC, Commerce, and International Business (MIB), postgraduate students of management specializing in finance, this accessible text can also be used for professional courses like CA and ICWA.

NEW TO THIS EDITION

• Explains International Financial Reporting Standards (IFRS) and its implementation.
• Includes four new chapters (Chapters 11–14) on international financial management, foreign exchange forecast, measurement and management of foreign exchange exposure to enlarge the scope of the book.
• Provides key terms at the end of each chapter for better comprehension.


Latest Print 2012 / 416 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4572-0 / 325.00

Latest Print 2013 / 660 pp. / 17.8 x 23.5 cm
SHIRIN RATHORE, Professor, Department of Financial Studies, University of Delhi from 1985 to 2007.

The year 2011 will be a milestone in the history of global standard setting, when nearly 150 countries would adopt international standards for financial reporting to be issued by the International Accounting Standards Board (IASB). This extensively revised, fully updated, second edition includes a wide range of topics with a view to examining the increased challenges that will be faced by academicians, accounting and management professionals in the globally converging dynamic environment of accounting standards expected around 2011.

The book is primarily intended as a text for postgraduate students of management (MBA) specializing in accounting and finance, postgraduate students of commerce (M.Com), financial studies, and international business (MIB). In addition, this text will be useful for professional courses offered by institutes such as the Institute of Chartered Accountants (ICAI), the Institute of Cost and Works Accountants (ICWA) and the Institute of Chartered Financial Analysts (ICFAI).


Latest Print 2011 / 504 pp. / 17.8 × 23.5 cm

WHAT IS NEW TO THE SIXTH EDITION:
• All chapters updated to give the latest information.
• New Case Studies and Study Topics added.

The book is primarily intended as a textbook for postgraduate students of Business Management (MBA), Master of International Business (MIB), Master of Commerce, Master of Economics, and Master of Financial Control (MFC). Besides, students of Chartered Accountancy and professionals in the financial field should find the book very valuable.


Latest Print 2013 / 580 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4586-7 / 395.00
Management Accounting: Text and Cases, 2nd ed.

N.M. SINGHVI, Chairman, Administrative Reforms, Human Resource Development and Manpower Planning Committee, Rajasthan.

RUZBEH J. BODHANWALA, Associate Professor in Management, NIIT University, Neemrana, Alwar, Rajasthan.

The book, now in its second edition, continues to provide a thorough and updated study of the text and cases included from the real-life shop floors. The comprehensive book gives an in-depth analysis of the fundamental concepts, principles and conventions of accounting. It further dwells onto the topics like balance sheet analysis, reading of annual report and capital structure planning, in detail.

The theory is flawlessly combined with the practical elements taken from the top-notch multinational companies of the country, to provide the students an analytical insight on the current market scenario.

Primarily intended for the undergraduate and postgraduate students of commerce, this book is equally beneficial for the postgraduate students of management.

NEW TO THIS EDITION
• Updated cases on Infosys, Wipro, GlaxoSmithKline, and Nestle
• Recent annual reports of Ingersoll-Rand India Limited

CONTENTS:

Latest Print 2012 / 496 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4656-7 / Rs 395.00

Management Control Systems

N. GHOSH, visiting faculty at Jankidevi Bajaj Institute of Management Studies, SNDT Women’s University, Mumbai.

This concise but systematic and rigorous text describes the theory and practice of management control systems in large organizations. It blends principles of accounting and concepts from behavioural sciences. The intricate theories of management control are elaborated with the help of real-life examples and case studies. A separate chapter on Mathematical Models for Management Control is intended to assist the reader in solving difficult managerial problems.

Primarily designed for the postgraduate students of management and commerce, this book would also be a valuable source of reference for professionals.

KEY FEATURES
• Gives a clear-cut idea of control operations through case studies
• Contains a fair mix of the two approaches of management control—the management accountant’s approach and the industrial engineer’s approach
• Provides a step-by-step explanation of the emergence of Activity-Based Costing System because of the failure of traditional cost systems in modern business environment

CONTENTS:

Latest Print 2012 / 248 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-2844-0 / Rs 195.00

PHI Learning: Publications
This compact and concise textbook gives a clear analysis of the principles and practices of management control systems which are generally being practiced by the companies all over the world.

Divided into seven sections, the book explains various approaches and design of management control system. It moves on with a detailed description of key success variables as control indicators, and explains goals, strategies and organization for adaptive control, divisional autonomy and responsibility. While describing the management tools and processes, the book explains in detail, the strategic planning and programming processes, budgeting and budgetary control, standard costing and variance analysis, transfer pricing, reward system and management control of operations. The text also contains various aspects of strategic cost management, cost analysis for managerial decision-making and control actions. It also explains how auditing can be used by the management in its various departments and subsidiaries as a tool of control system. The book concludes with the discussion on current issues and their relationship with management control system.

Primarily intended for the postgraduate students of management, the book can be equally beneficial for the commerce students, researchers, accounts professionals, and corporate policy and decision-makers.


Latest Print 2011 / 304 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4220-0 / 225.00

Managerial Economics

E. NARAYANAN NADAR, Associate Professor and Head in the Postgraduate Department of Economics, V.H.N Senthikumara Nadar College, Virudhunagar, Tamil Nadu.

S. VIJAYAN, formerly Head, Department of Management Studies at V.H.N Senthikumara Nadar College, Virudhunagar, Tamil Nadu, is a well-known Management Consultant.

Managerial Economics has assumed a predominant role in today’s globalized and liberalized economy because of the financial implications of many decisions that a manager has to take in his day-to-day professional life. This comprehensive and student-friendly book, now in its second edition, strives to equip the young, practising and budding managers to find solutions to the real-world problems through the efficient and effective use of economic tools and techniques. The authors who admirably combine academic and professional experience give a clear and straightforward analysis of the various topics in managerial economics.

The text begins with an overview of managerial economics and describes the modern business firm and its objectives along with the concepts of market mechanism, demand theory and production analysis. The text then moves further to explain managerial techniques, macroeconomic theory and international trade and finance along with the risks and uncertainties involved in business. Besides, it also explains the cost and revenue, supply, pricing, profit and investment analyses. Finally, this book discusses some important Case Studies to reinforce the concepts presented in the text.

In this edition, a new section on eleventh five year plan (2007–2012) has been included in Chapter 15 to enhance the utility of the book.

Intended as a text for postgraduate students of Management, Commerce and Economics, the book would also be useful for undergraduate engineering courses where Managerial Economics is offered. Finally, the book can be profitably used by marketing and management consultants, business executives and other related professionals.


Latest Print 2013 / 332 pp. / 17.8 × 23.5 cm
The role of Managerial Economics has become all the more important today because of the increasingly competitive business world and the financial implications of many managerial decisions in such a scenario. This compact yet comprehensive book discusses the basic concepts and techniques of microeconomic analysis and their applications to managerial decision making with many useful and practical examples.

The text explains the basic concepts of the demand function and demand curve, the supply function and the supply curve, demand elasticities and their applications, techniques of demand estimation, and the theory of consumer behaviour. It also analyzes the theory of production, clarifies the nature of economic costs, and describes the profit maximizing tools of a business firm. Finally, the book describes standard pricing rules under different assumptions about the structure of the market in which the firm operates and examines certain pricing practices such as mark-up pricing and multiple products pricing.

**KEY FEATURES**

- Gives many Indian cases and Indian examples.
- Provides data analysis of certain firms and industries in India with respect to sales or demand forecasting through statistical tools.
- Gives multiple choice, analytical and applied questions at the end of each chapter.

Intended as a text for the postgraduate students of management, the book would be equally useful for the postgraduate students of Commerce and Economics. Besides, practising managers should find the book quite valuable.


Latest Print 2010 / 304 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4094-7 / ₹ 250.00

**Managerial Economics and Financial Accounting**

M. KASI REDDY, Associate Professor, School of Management Studies, Chaitanya Bharathi Institute of Technology, Hyderabad.

S. SARASWATHI, Senior Assistant Professor, School of Management Studies, Chaitanya Bharathi Institute of Technology, Hyderabad.

This text presents an accessible introduction to techniques and applications of economic analysis and financial accounting as a method for approaching real-life business problems for managerial decision making in a logical manner. It focusses on the essential skills needed to formulate business policies that help gain a competitive edge in today’s work environment.

The book discusses the basic concepts, terminology, and methods that eventually allow students to interpret, analyse, and evaluate actual corporate financial statements. It covers the major areas of managerial economics and financial accounting such as the theory of the firm, the demand theory and forecasting, the production and cost theory and estimation, the market structure and pricing, investment analysis, accountancy, and different forms of business organisations.

The book includes numerous examples, problems, self-assessment tests, as well as review questions at the end of each chapter to aid in working out solutions to business problems.

The book will be particularly suitable for courses in Managerial Economics and Financial Accounting as part of an engineering degree education at undergraduate level where the students have no previous background in economic and financial analysis. It will also be immensely useful for M.B.A., M.Com. and C.A. students, business executives, and administrators who need to learn the application of economic theory to realistic business situations.


Latest Print 2011 / 592 pp. / 17.8 × 23.5 cm
During the last couple of decades or so, mergers and acquisitions (M & As) have assumed great importance. Giant corporations and big multinational enterprises (MNEs) are constantly on the lookout for acquiring big or small companies to increase their wealth and become even bigger global giants. It is in this context that a comprehensive book on M & As such as the one authored by Professor Kamal Ghosh Ray becomes so significant.

This well-balanced and well-researched text is a harmonious blend of theoretical concepts and practical aspects on mergers and acquisitions. The book begins with an analysis of the causes of and strategic approaches to M & As. Then it goes on to give a detailed discussion on the valuation aspects—valuing the enterprise, business, brands, goodwill, HR and customer relationships, valuing synergy, valuing of private sector companies and family business besides dealing with business valuation standards in USA and India. Finally, the book concludes with a comprehensive coverage of accounting for the legal aspects of and integration in mergers and acquisitions. The text is profusely illustrated with examples, tables and case studies.

Intended as a text for PG students of management, this book would also be of immense value to students of chartered accountancy, cost accountancy and company secretaryship. In addition, it would appeal to a broad spectrum of professionals ranging from strategic planners, CFOs, CEOs, COOs, financial analysts, bankers, venture capitalists, to portfolio managers and entrepreneurs. Finally, the book would be treasured by anyone who is interested in Mergers and Acquisitions—an increasingly topical subject.

CONTENTS:

Latest Print 2013 / 888 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3975-0 / ₹ 495.00

**Microeconomics**

SAMPAT MUKHERJEE, MALLINATH MUKHERJEE and AMITAVA GHOSE, all with Department of Economics, St. Xavier’s College, Kolkata.

This comprehensive text on Microeconomics provides complete understanding of the subject and is written in reader-friendly language. Each chapter introduces the major economic concepts with illustrative examples. The theories have been spelt out without the use of rigorous mathematics. The text is prepared strictly referring to the new all-India Syllabi. It contains both numerical and logical questions at the end of each chapter. Each chapter is followed by a list of major concepts and their brief elaboration—that will help the students to quickly review the main arguments.

The text is suited for courses in Microeconomics for graduate students of Economics and Management.


Latest Print 2003 / 368 pp. / 17.8 × 23.5 cm
ISBN-81-203-2318-1 / ₹ 195.00
Public Finance

M. MARIA JOHN KENNEDY, Associate Professor in Economics, Department of Economics, Arul Anandar College, Karumathur, Madurai, Tamil Nadu.

Public finance is a fascinating, challenging and evergrowing subject which has the unique distinction of having intimate interaction between theory and practice. This thorough and comprehensive textbook explains the core concepts of public finance such as taxation, public expenditure, budgeting, federal finance and related aspects in a concise and systematic manner.

Systematically divided into nine parts, the book elaborates the various aspects of fiscal economics in a student-friendly manner. As the Indian economy is committed to the goal of growth with justice, there is an inherent analysis of growth and welfare consideration in the treatment of the subject. The chapters are incorporated with real-life examples giving practical insight into the subject.

Well-written and eminently readable, the text is suited to the needs of undergraduate students of economics for a course in Public Finance/Public Economics. Besides, this book will also be beneficial to the students preparing for various competitive examinations.

KEY FEATURES
• Chapter-end summary reminds students the most important aspects of the chapter.
• Key terms provide a bird’s eye-view of each chapter for quick revision.
• Review questions and multiple-choice questions at the end of each chapter are designed to probe a student’s grasp of concepts discussed in the text.
• References are provided for further study and research.


Latest Print 2013 / 364 pp. / 17.8 × 23.5 cm ISBN-978-81-203-4539-3 / ₹ 325.00

Commodity and Financial Derivatives, 2nd ed.

S. KEVIN, Director and Dean of Management Studies, Bishop Jerome Institute, Kollam.

This is the second edition of the book on Commodity and Financial Derivatives. It provides an in-depth analysis of the underlying concepts of the different types of commodity and financial derivatives, namely, forwards, futures, options and swaps. It explains the trading processes of the derivatives and highlights their uses.

Beginning with an overview of the subject, the text discusses in detail the forwards emphasizing the currency forward. It presents the different types of futures—commodity futures, currency futures, stock futures, index futures, interest rate futures—and the different types of options—stock options and currency options. The text continues to explain the option pricing models. It concludes with a chapter on financial swaps, which describes the operational modalities of currency swaps and interest rate swaps.

The Indian context and environment are highlighted while explaining the trading processes of the different types of derivatives to familiarize the reader with the Indian derivatives market. The text is supported by illustrative examples, diagrams, tables and review questions to reinforce the understanding of the subject matter. The textbook is primarily intended for the postgraduate students of finance, commerce and management. It will also be useful to all those who are engaged in derivatives trading and who facilitate derivatives trading.

NEW TO THE SECOND EDITION
A large number of numerical examples and exercises are added to the various chapters to help the users understand the practical application of derivatives in hedging risk in diverse situations.


BUSINESS AND MANAGEMENT

Accounting / Finance (Securities)

Commodity Derivatives and Risk Management

PRABINA RAJIB, Professor, Vinod Gupta School of Management, Indian Institute of Technology, Kharagpur, West Bengal.

Over the last decade, commodity derivatives trading in India has undergone a significant growth, and has surpassed equity derivatives trading. The book covers almost the entire spectrum of commodities traded in the Indian commodity market, including agricultural commodities, crude oil, base metal, precious metal, electricity, carbon, weather, freight, real estate, and water.

A distinguishing feature of the book is that it lucidly explains the peculiarities of various commodities, delving into their technical and historical details. As commodity market in a country cannot function in isolation, commodity contracts traded in other international exchanges, like LME, CME, The Baltic Exchange, Nordpool, etc. have also been discussed in detail.

Commodity derivatives contracts, such as futures, FRAs, options, Tapos, swaps, spreads (crush, crack, dark and spark), collars, ETFs, Contract for Differences (CFDs) and cool bonds, etc. have been discussed extensively. Fundamental factors associated with different types of commodities have been dealt with to develop a deeper understanding of the peculiarities associated with various commodities.

This book documents the case studies involving important commodity price manipulations and frauds in commodity derivatives trading. These have been analyzed to bring out the necessity and the role of the commodity market regulators in maintaining market integrity. Major commodity derivatives trading losses that have shaken up even some prominent companies all over the world have been discussed to highlight the risks associated with commodity derivatives trading.

The book is intended for the postgraduate students of Management. It is equally beneficial for the students and professionals opting for Diploma courses in Banking and Finance.


Financial Derivatives

S.S.S. KUMAR, Associate Professor, Indian Institute of Management Kozhikode (IIMK) in the Accounting, Finance and Control area.

Designed as a text for postgraduate students of management, commerce, and financial studies, this compact text clearly explains the subject without the mathematical complexities one comes across in many textbooks. The book deals with derivatives and their pricing, keeping the Indian regulatory and trading environment as the backdrop. What’s more, each product is explained in detail with illustrative examples so as to make it easier for comprehension.

The book first introduces the readers to the derivatives market and the quantitative foundations. Then it goes on to give a detailed description of the Forward Agreements, Interest Rate Futures, and Stock Index Futures and Swaps. The text also focuses on Options—Option Pricing, Option Hedging and Option Trading Strategies. It concludes with a discussion on OTC derivatives.

KEY FEATURES

• The application of each derivative product is illustrated with the help of solved examples.
• Practice problems are given at the end of each chapter.
• A detailed glossary, important formulae and major website addresses are included in the book.

This book would also be of immense benefit to students pursuing courses in CA, ICWA and CFA.


Latest Print 2014 / 428 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-3074-0 / 395.00
Financial Derivatives: Theory, Concepts and Problems

S.L. GUPTA, Dean and Professor of Finance, Department of Management, Kurukshetra University.

Financial Derivatives occupy a significant and integral part of the global capital markets. This up-to-date text gives an in-depth analysis of the underlying concepts and technical aspects of financial derivatives. It also dwells on the financial markets where these derivatives are traded.

Organized into five sections, the text balances rigour with clarity of explanations and practical treatment of the subject. Each chapter begins with a brief theoretical description followed by relevant examples. Diagrams, charts and tables at appropriate places illustrate the concepts discussed.

Primarily intended for the students of Finance, Commerce and Management, this text will also be useful to Derivative practitioners (Equity researchers, portfolio managers, financial executives and members of stock exchanges), chartered financial analysts, chartered accountants, investors and policy makers.


Portfolio Management, 2nd ed.

S. KEVIN, Professor of Commerce, Institute of Distance Education, University of Kerala, Thiruvananthapuram.

The second edition of this concise and compact text recognizes the significance of portfolio management as an essential skill rather than just a theoretical base for investors in today’s world. It is a comprehensive, well-organized text on various aspects of portfolio management such as analysis, selection, revision and evaluation of portfolios of securities for deriving maximum benefit from one’s investments.

The book also discusses in detail the basic methods of security analysis such as fundamental analysis and technical analysis, shares and bond valuation, efficient market theory, and the capital asset pricing model.

NEW TO THE SECOND EDITION

• Provides numerous new examples that illustrate mathematical aspects of the theory.
• Gives enough exercises at the end of each chapter to test the student’s understanding of the subject.

This book, with many student-friendly features, would be best suited for students of commerce and management. It would be equally useful to postgraduate students pursuing courses in financial control (MFC), chartered accountancy (CA), cost and work accountancy (CWA), and chartered financial analysis (CFA). It would also prove to be an asset to the professionals in the investment field.


This well-organised, lucidly written text deals with the basic concepts of investment in securities such as bonds and stocks, and management of such assets. It not only discusses various aspects of portfolio management, ranging from analysis, selection, revision to evaluation of portfolio, but also elaborates on financial derivatives, securities market and risk evaluation that help in understanding the trading system better and making quality investment decisions.

Besides explaining the theory of portfolio management that comprises fundamental and technical analyses, shares and bond valuation, efficient market theory and the capital asset pricing model, the book also provides a detailed analysis of the latest developments in securities trading.

**KEY FEATURES**

- Gives a large number of examples to illustrate the concepts discussed.
- Provides chapter-end exercises to test the student’s grasp of the subject.
- Discusses in detail about Indian stocks and shares market to help the student understand the subject in the country’s current scenario.

This concise yet comprehensive book is intended as a text for students of management and commerce.


Latest Print 2014 / 296 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-2963-8 / ` 225.00
This comprehensive book discusses in detail the problem areas that organizations find difficult to address for achieving organizational effectiveness and managing change, and suggests how such problems can be tackled in an effective manner. The text begins with a discussion on the definition of organizational effectiveness and its various models, and then goes on to explain the concepts of management by objectives, total quality management, business process reengineering, and six sigma, which are so crucial for organizational effectiveness.

Expectations of customers are invariably increasing and quality-products are in demand more than ever before. Globalization and competition between companies have accentuated the problem. To fulfill customer aspirations and adhere to world class standards, organizations need to modify their structural framework. And so the text devotes a separate chapter each to such concepts as virtual organization, corporate governance, and developing collaborations. The book concludes with an emphasis on the role of motivation, leadership and team building in organization effectiveness. Case study given at the end of each chapter illustrates the concepts discussed and lends a practical flavour to the text.

The book is designed for the postgraduate students of management. It would also be useful for the executives who want to implement change in their organization to be competitive in the market, and those who wish to keep pace with the changing business environment.

Change is the law of life. This precept holds for individuals and organizations alike. Radical change, called transformation, is not so frequent. Organizational transformation entails fundamental changes that encompass the entire gamut of the organization. A successful transformation exercise begins with formulating a set of Objectives at the beginning and ends up with realizing the desired Outcomes. This book delves deep into the intricacies of the life cycle of organizational transformation and explains how it can be managed effectively adopting a systematic and step-by-step methodology. In this well-researched text, the author, J. Satyanarayana, with his vast and varied experience in the field of management and governance, gives a brilliant exposition of managing transformation.

The book postulates the O2O (Objective to Outcomes) framework as a seven-step methodology. O2O, in a sense, is a meta-framework for transformation. It harmonizes and synthesizes altogether 40 sub-frameworks, which include some well-known concepts, such as Porter’s Value Chain Framework, Kaplan and Norton’s Balanced Scorecard, and Hammer’s BPR framework. The author illustrates the O2O framework through a Case Study on Passport Seva Project, designed by him, and being implemented all over India to transform the quality of passport-related services provided to the citizens.

KEY FEATURES
• By expounding the O2O methodology, the book addresses the managerial requirements of conceptualizing, designing and implementing major transformation projects.
• The book focuses on the four principal dimensions of transformation, namely, Process, People, Technology, and Business Model while explaining the major concepts.
• The text is interspersed with plenty of examples to illustrate the concepts.
• The book also includes chapter-end review questions to drill the students in self-study.

This text, with its blend of theory and practice, would prove extremely valuable to the administrators and organizational psychologists, the book would also be an invaluable aid to practising managers and even supervisors.

INTENDED READING PUBLIC:
This book postulates the O2O (Objective to Outcomes) framework as a seven-step methodology. O2O, in a sense, is a meta-framework for transformation. It harmonizes and synthesizes altogether 40 sub-frameworks, which include some well-known concepts, such as Porter’s Value Chain Framework, Kaplan and Norton’s Balanced Scorecard, and Hammer’s BPR framework. The author illustrates the O2O framework through a Case Study on Passport Seva Project, designed by him, and being implemented all over India to transform the quality of passport-related services provided to the citizens.

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• The book also includes chapter-end review questions to drill the students in self-study.

This text, with its blend of theory and practice, would prove extremely valuable to the administrators and organizational psychologists. This handy text describes such situations as employees need professional help as well as emotional and mental support. This handy text describes such situations as employees need professional help as well as emotional and mental support. This handy text describes such situations as employees need professional help as well as emotional and mental support. This handy text describes such situations as employees need professional help as well as emotional and mental support. This handy text describes such situations as employees need professional help as well as emotional and mental support. This handy text describes such situations as employees need professional help as well as emotional and mental support. This handy text describes such situations as employees need professional help as well as emotional and mental support. 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This handy text describes such situations as employees need professional help as well as emotional and mental support. This handy text describes such situations as employees need professional help as well as emotional and mental support. This handy text describes such situations as employees need professional help as well as emo...
For creating a balance in the organizational environment, harmonization amongst the employees and the employer is a prerequisite. The factors that help determining an organizational balance are the sociology of an environment, psychology of the people working there, channel of communication, and sound and rationalized management. This book underlines the fundamental concepts of Organizational Behaviour, and its application in the Indian organizational scenario.

The book comprises 29 chapters—the concluding chapter devoted to cases from various Indian industry verticals. Chapters 1–3 deal with basics of organizational behaviour, its history and the challenges. Chapters 4–10 are devoted to various aspects of individual behaviour, e.g., perception, personality, learning theories, attitude and motivation theory. Chapters 11 to 16 dwell onto the topic of group behaviour like team dynamics, transactional analysis, leadership, emotional and spiritual intelligence and management of conflicts. Chapters 17 to 28 are largely focused on various aspects of organization, such as its structure, its HR policies, International Organizational Behaviour and Corporate Governance and its role in determining the ethical norms for an organization.

This book is designed for the postgraduate students of Management and Commerce. Besides, it can be beneficial for the managers and executives, to help them tackle Human Resource and organization-related problems.

**KEY FEATURES**
- Every chapter is concluded with a real-life case study
- Appendices added to most of the chapters are interpretation-based Questionnaire to analyze behavioural traits of employees and employers
- Review questions and case study questions to judge students’ comprehension of the subject

**CONTENTS:**

Latest Print 2013 / 644 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4696-3 / ` 450.00
Organization Development

C.S.G. KRISHNAMACHARYULU,
Director, RVS Institute of Management Studies and Computer Applications, Puducherry.

LALITHA RAMAKRISHNAN,
Professor and Head, Department of Management and Centre, Pondicherry University—Karaikal Campus.

Organization Development (OD) is a process to bring in changes in terms of strategies, structures and technology in an organization, for positive growth and better sustenance of it, in an ever-changing corporate world. This book comprehensively deals with the strategies, structure and the concepts of Organization Development (OD), which helps an organization to work and run effectively in the changing environment.

The book is a rich amalgamation of OD theoretical frameworks, tools and experiences of practitioners in India and abroad. It provides an exhaustive coverage of core and related issues of Organization Development throughout its 15 Chapters. The foundational concepts of organizational structure, climate culture and change are explained vis-à-vis current trends in OD, like techno-structural interventions and strategy, planning and training interventions. It also digs deep into the future of Organization Development in the coming years.

Every chapter of the book is incorporated with an opening Case Vignette, Real Shop Floor Cases and figures, tables and boxes to make the reading more educative, explorative and evaluative. The mini-projects and web-based assignments, along with the review questions, further make the learning interactive and valuable for the students.

The book is specifically intended for the postgraduate students of management. However, it is equally beneficial for the trainees, managers and OD practitioners.

KEY FEATURES
• Every Chapter is incorporated with an opening Case Vignette to give a practical insight to the subject
• Live Shop Floor Cases to provide applicative knowledge of various concepts of OD to the students
• Illustrative Figures, Tables and Boxes offer additional dimensions to the theoretical explanations.


Latest Print 2013 / 476 pp. / 17.8 x 23.5 cm

Understanding Organisations: Organisational Theory and Practice in India

MADHUKAR SHUKLA, Professor, Xavier Labour Relations Institute, Jamshedpur.

This easy-to-read and compact book on Organisational Theory (OT) gives an account of what an organisation is and how it operates. It shows that organisations are not static entities, but are dynamic: capable of growing, changing, failing or transforming themselves.

The book begins with a discussion on the perspectives and approaches needed for understanding, designing and changing organisations. It then goes on to give a description of the building blocks and the various influences that determine organisational design. The author rightly emphasizes that the ideal organisation is one that is adaptive to a specific situation. He tells not only what an organisation is, but shows how it functions, for instance, how decisions are taken, how conflicts and power interact in moulding an organisation, how values and norms influence performance, and so on. Finally, the text stresses how organisations change or are transformed or why some do not change, and highlights emerging issues in organisational design.

The author skillfully elucidates organisational theory with real-life examples from well-known Indian Organisations.

Intended as a textbook for the students of Management, this study should also be ideal for practising managers, consultants and teachers.


Latest Print 2013 / 276 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-1122-0 / 275.00

C.S.R. PRABHU, Deputy Director General, National Informatics Centre (NIC), Hyderabad.

The Third Edition of this well-received text analyzes the fundamental concepts of data warehousing, data marts, and OLAP. The author discusses, in an easy-to-understand language, important topics such as data mining, how to build a data warehouse, and potential applications of data warehousing technology in government. Besides, the text compares and contrasts the currently available software tools used to design and develop data warehouses. The book is a blend of the principles and real-life case studies. While retaining the six existing case studies, it gives four new case studies:

- HARBOR, A Highly Available Data Warehouse
- A Typical Business Data Warehouse for a Trading Company
- Customer Data Warehouse for the First and Largest Online Bank in the United Kingdom
- A German Supermarket EDEKA’S Data Warehouse

The book, which is a blend of principles and real-life case studies, as a text is intended for students of B.Tech/M.Tech (Computer Science and Engineering), B.Tech/M.Tech. (Information Technology), MBA, M.Sc. (Computer Science), M.Sc. (Information Technology), and MCA. It should also be of considerable utility and worth to software professionals and database practitioners.


Database Management System, Oracle SQL and PL/SQL

PRANAB KUMAR DAS GUPTA, Senior Scientist in Defence Research and Development Organization (DRDO). Presently he is Joint Director at Proof and Experimental Establishment, Chandigarh.

P. RADHA KRISHNA, Principal, Research Scientist at Infosys Labs, Infosys Limited, Hyderabad.

Database Management System (DBMS) and Oracle are essentially a part of the curriculum for undergraduate and postgraduate courses in Computer Science, Computer Applications, Computer Science and Engineering, Information Technology and Management. The book is organized into the three parts to introduce the theoretical and programming concepts of DBMS. Part I: Basic Concepts and Oracle SQL, deals with DBMS basic, software analysis and design, data flow diagram, ER model, relational algebra, normal forms, SQL queries, functions, subqueries, different types of joins, DCL, DDL, DML, object constraints and security in Oracle. Part II: Application Using Oracle PL/SQL, explains PL/SQL basics, functions, procedures, packages, exception handling, triggers, implicit, explicit and advanced cursors are explained using suitable examples. This part also covers advanced concepts related to PL/SQL such as collection, records, objects, dynamic SQL and performance tuning. Part III: Advanced Concepts and Technologies, elaborates advanced database concepts such as query processing, file organization, distributed architecture, backup, recovery, data warehousing, online analytical processing and data mining concepts and their techniques.

All the chapters include a large number of examples. To further reinforce the concepts, numerous objective type questions and workouts are provided at the end of each chapter.


Latest Print 2013 / 576 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4842-4 / 525.00
RAJESH NARANG, Chief Technology Officer, National Institute of Smart Government, New Delhi.

The contents of this second edition have been appropriately enhanced to serve the growing needs of the students pursuing undergraduate engineering courses in Computer Science, Information Technology, as well as postgraduate programmes in Computer Applications (MCA), MSc (IT) and MSc (Computer Science). The book covers the fundamental and theoretical concepts in an elaborate manner using SQL of leading RDBMS—Oracle, MS SQL Server and Sybase.

Realizing the importance of RDBMS in all types of architectures and applications, both traditional and modern topics are included for the benefit of IT-savvy readers. A strong understanding of the relational database design is provided in chapters on Entity-Relationship, Relational, Hierarchical and Network Data Models, Normalization, Relational Algebra and Relational Calculus. The architecture of the legacy relational database R system, the hierarchical database IMS of IBM and the network data model DBTG are also given due importance to bring completeness and to show thematic interrelationships among them.

Several chapters have been devoted to the latest database features and technologies such as Data Partitioning, Data Mirroring, Replication, High Availability, Security and Auditing. The architecture of Oracle, SQL of Oracle known as PL/SQL, SQL of both Sybase and MS SQL Server known as T-SQL have been covered.


Latest Print 2012 / 480 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4313-9 / 325.00

R. PANNEERSELVAM, Professor, Department of Management Studies, School of Management, Pondicherry University, Puducherry.

This revised and updated book, now in its Second Edition, continues to provide excellent coverage of the basic concepts involved in database management systems. It provides a thorough treatment of some important topics such as data structure, data models and database design through presentation of well-defined algorithms, examples and real-life cases. There is also detailed coverage of data definition and data manipulation parts of IMS and PC-FOCUS—the two popular database management systems—to access and manipulate hierarchical database, besides IDMS (Network) and Interactive SQL (Relational) database languages, using suitable programs based on case studies.

WHAT IS NEW TO THIS EDITION
• Includes five new chapters, namely, Distributed Database Management System, Client/Server Systems, Data Warehousing, Data Mining, and Object Oriented Database Management System (OODBMS) to cover the modern concepts of DBMS.
• Provides a new section on cryptography for network security.

The textbook is primarily designed for the postgraduate students of management, computer science and information technology. It should also serve as a useful text for B.E./B.Tech. students in computer science engineering and software engineering. Besides students, this book will also be useful for computer professionals engaged in design, operation and maintenance of database.


Latest Print 2011 / 404 pp. / 17.8 x 23.5 cm
### Learning Oracle SQL and PL/SQL: A Simplified Guide

**Rajeeb C. Chatterjee**, Visiting faculty in the Department of Information Technology, Jadavpur University.

This book offers a systematic knowledge of the Oracle SQL and PL/SQL so that the students can exploit the capabilities of the database in an effective and efficient manner. The book follows a step-by-step approach to the subject with suitable real-world cases, examples and exercises that make it a complete and effective self-study guide. The book can also be used for practical classes on oracle. It can be used for Oracle version 8.0 onwards. The availability of an authorized oracle database in conjunction with the book is sufficient to learn Oracle commands, syntaxes, operators, built-in function, techniques for creation, alterations and uses of table structures. Screenshots have not been presented in the book to avoid confusion due to differing platforms that the students may use in different environments.

Designed to address the need of the laboratory classes on Oracle for the undergraduate and postgraduate students of Computer Science and Information Technology as well as the students of Computer Applications, this book is also useful for the professionals for conducting training program on Oracle.


| Latest Print 2012 | 312 pp. | 17.8 x 23.5 cm | ISBN-978-81-203-4542-3 | 350.00 |

### E-Commerce: An Indian Perspective, 4th ed

**P.T. Joseph, S.J.**, Professor, Information Systems and Organizational Behaviour at the Xavier Institute of Management (XIM), Bhubaneswar. Currently, he also holds the position of the Director of XIM Bhubaneswar.

Electronic Commerce is an exciting field of business sector, with new issues emerging continually in this global and real time business activity. The comprehensive coverage of this fourth edition equips the students with the latest information in e-commerce-concepts, models, strategies, and techniques that can be used to build useful e-commerce applications.

The range of topics covered is broad, making this book a solid introductory text for the rapidly expanding number of courses in e-commerce for business students at the undergraduate or postgraduate level, and also for students pursuing courses in computer applications, information technology and information science.

The book features several comprehensive and diverse case studies and data on Indian corporations, as well as multinational companies showing success and failure of their Web-based electronic business models. New material on developments in technology and general business strategy has been added in all the chapters.

This fundamental treatment of the subject of e-commerce coupled with a clear and practical analysis of market models, continues to make this text an invaluable single source guide for students-arming them with skills to deal successfully with the managerial issues they will face as future business professionals.

**KEY FEATURES**

- Provides coverage of all elements of e-commerce including customer relationship, supply chain management, e-payment, e-security, mobile commerce, and Web designing.
- Addresses key legal issues related to cyberstalking, privacy, copyright, and so forth.
- Gives the end-of-chapter Internet search exercises to help students develop analytical skills.
- Defines key technical terms in the glossary.


| Latest Print 2013 | 568 pp. | 17.8 x 23.5 cm | ISBN-978-81-203-4505-8 | 425.00 |
This book is designed to acquaint the readers with major aspects of e-commerce with particular emphasis on technology such as cryptography, e-payment and mobile payment security.

The book presents a layered architecture of e-commerce systems with six layers. The physical layer (the bottommost layer) described first, provides the basic communication infrastructure needed by e-commerce. The next layer described is the logical layer consisting of Local Area Networks, the Internet, Intranet, etc. which provide connectivity. The layer above is the network services layer which provides e-mail and World Wide Web applications. Above this is a very important messaging layer of e-commerce which provides facilities for exchanging messages securely using the communication infrastructure. Here various methods of encryption, public key infrastructure and digital signature are discussed. It is also explained as to how the messaging layer is used to exchange structured electronic documents, using XML. The next layer called middleman services layer, describes the design of home page of an organization and elaborates various payment services such as credit card, e-cash, smart card, etc. The topmost layer is on applications, namely, B2C, B2B and C2C e-commerce which are defined and described at the beginning of the book.

As use of mobile phones and mobile network is rapidly increasing, a whole chapter is devoted to explain m-commerce. Of special interest are detailed discussions of Wireless Application Protocol, security issues and payment methods. A complete chapter is also devoted to new developments in multimedia information goods such as e-books, MP3 compressed audio and digital quality video. A unique feature of these goods is the method of delivery which also uses the mobile Internet infrastructure. The legal framework of e-commerce is also provided—the Information Technology Act 2000 (and the amended act of 2008) is explained.

This book with its numerous student-friendly features is an ideal text for undergraduate and postgraduate students of Computer Science and Information Technology (BSc and MSc), Computer Applications (BCA and MCA), and for undergraduate engineering students of Computer Science and Engineering and Information Technology.


VINOD KUMAR GARG, Professor of Information Management at S.P. Jain Institute of Management and Research, Mumbai.
N.K. VENKITAKRISHNAN, General Manager, Sales, for a leading software organization based in Mumbai.

Enterprise Resource Planning (ERP), one of the fastest growing segments in Information Technology today, enables organizations to respond quickly to the ever increasing customer needs and to capitalize on market opportunities.

This revised edition continues to throw light on the significance of Business Engineering and its link with Information Technology. Besides, it discusses the role of consultants, vendors and users, the process of customization, as well as the methodology and guidelines for ERP implementation.

Chief executives, functional managers, MIS managers, students of management courses and organizations will find this book as an easy reference for understanding the concepts of ERP and enable organizations to implement ERP solutions.

HIGHLIGHTS OF THE SECOND EDITION
• Focusses on Indian ERP packages, with a new section on "Example of an Indian ERP Package".
• Provides Answers at the end of the book to most of the problems given at the end of each chapter for the benefit of both the students and the teachers.


Latest Print 2014 / 200 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-2254-7 / 175.00

Mobile Commerce

KARABI BANDYOPADHYAY, Chairperson, Technology and Faculty, Information Systems, in International School of Business & Media, Kolkata.

Once the treasured piece of the elite class, mobile phones have now become a prerequisite of every commoner. From schoolchildren to pensioners, from bureaucrats to fruit vendors, all depend greatly on their mobile phones. The reason can be given to its impeccable potential to perform various applications efficiently, within no time. This book on Mobile Commerce gives an in-depth insight on the role of a mobile in revolutionizing various industry verticals, specifically business and commerce.

The book shows the evolution of a mobile phone from a mere gadget meant for communication to a smarter one performing business transactions. The book is divided into seven parts segregated as—Basic concepts, Technology, Key players, Key products, Security of legal aspects, the Future trends and the Case studies. The book also discusses various technologically advanced handheld devices, like Smartphones, PDA’s, Laptops, Tablets and Portable gaming consoles, in detail.

Besides, the basic technology and concepts involved in mobile commerce is discussed comprehensively. The key concepts, like mobile marketing, mobile ticketing, mobile computing, mobile payments and mobile banking are discussed vis-a-vis latest technologies, like wireless and mobile communication technology, digital cellular technology, mobile access technology and 4G and 5G systems.

The book also throws light on the issues, such as mobile security hazards, and the necessary measures to protect the same. A chapter is devoted to laws governing the mobile phone usage and its privacy. The Case Studies are provided elucidating the role of mobile commerce in the real-life scenarios.

This book is intended for the undergraduate and postgraduate students of Communication Engineering, Information Technology and Management.


Latest Print 2013 / 384 pp. / 17.8 x 23.5 cm
Over the last two decades, large corporations and companies worldwide have been implementing Enterprise-wide Resource Planning (ERP) applications. This has today percolated down to the midsize companies as the benefits of ERP applications are appreciated. Not surprisingly, in business schools across the country, ERP has become a popular and major subject of study. This accessible, easy-to-read book explains the ERP concept, its theory and implementation with practical case studies. Throughout, the focus remains on the Indian scenario. While Part I of the book deals with the theory of ERP with detailed discussions on best practices in ERP, ERP vendor analysis, its basic functional modules and its implementation, Part II describes ERP “As Is” to ERP “To Be”.

The book details and delineates the fundamental and advanced features of ERP in a style that is intelligible to the reader. It presents a structured methodology designed to help students understand the conceptual elements of ERP as well its implementation.

The book is intended as a text for postgraduate students of management and as reference for the practicing professionals. That it is based on the author’s vast experience in more than 65 Indian manufacturing companies, and is a reader-friendly text with a number of diagrams, screenshots, and tables further enhances its value.


Latest Print 2013 / 164 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-2633-0 / £ 175.00
P.K. AGRAWAL was a Program Manager at Tata Technologies Limited, Pune.

SAP HR BOOKS
This book is one of the set of our four books on SAP HR written by the author:
• SAP HR OM, PD and Training
• SAP HR Personnel Administration and Recruitment
• SAP HR Time Management
• SAP HR India Payroll

A Better World
There is a lot we can do to make our world a better world. Read short articles inside on some of the ideas of World Integration and Improvement Initiative.
• World Government, 655
• World Language, 657
• Good Governance, 663
• City without Traffic Lights, 669

SAP is a great software. One needs to fully understand its features in order to effectively exploit them for the benefit of customers. Mr. Agrawal’s books on SAP HR have a unique approach. A chapter usually focuses on a single business concept, and discusses the user interface as well as its associated configuration. This logical division makes it easier for readers to understand the functionality. Another important feature of these books is the level of detail. Each screen and each field in a screen is explained. Explanation includes meaning, use case and in some cases guidelines. Details are balanced by overviews explaining the concepts and their relationships. While explaining functionality, Mr. Agrawal has made efforts to highlight what can be done and how it is to be done. This is particularly important for less experienced users and consultants. Indicating chapter numbers against each menu and configuration item is a very useful innovation, as it establishes direct link between the SAP system and the book. Another useful feature is that these books can be read not only by consultants, but also by users, business process owners and even by senior managers. The importance of each topic for each category of users is specified.

Mr. Agrawal has taken considerable pains in writing these books, and I congratulate Mr. Agrawal on his achievement and thank him for his contribution to the SAP community.

K. Sanjai, Regional Head–Asia Pacific & Japan, SAP Global Delivery

CONTENTS:

Latest Print 2014 / 720 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4223-1 / 595.00
This book explains all the concepts underpinning SAP’s HR Time Management Module. It is a comprehensive technical manual which explains every single node of the User Menu and the Configuration. The book first gives an overview of a concept explaining what it is, how it is used and how it relates to the other concepts. It then explains its properties, which are fields in a configuration node.

This book is designed to be used both as a reference manual and a learning guide. As a learning guide, it offers four views, each for a different target audience.

- It can be read from the Senior Management’s perspective to gain a broad understanding of the subject and what SAP can do for them.
- Business Process Owners can achieve a higher level of understanding by getting to know more of SAP concepts and how to perform different tasks in SAP.
- Users can acquire a thorough understanding of different tasks and concepts underlying them.
- Functional consultants and proficient users can read the book to gain a complete understanding of the system.

As a technical reference, the book can be used to locate the relevant material through the Table of Contents, Index, ‘SAP Menu’ and ‘SAP Customizing Implementation Guide (IMG)’. The last two follow the Table of Contents. If the reader is in SAP’s User Menu or Configuration, the chapter number for these nodes can be found in ‘SAP Menu’ and ‘IMG’. If a node is not covered in the book, the reason for not doing so is mentioned.

The implementation of SAP HR Time Management and documentation can also be guided by the structure of this book.

CONTENTS:
- Preface.
- Infotypes.
- Employee Groupings.
- Work Schedule.
- Substitution.
- Absence.
- Attendance.
- Absence Quota.
- Quota Correction.
- Attendance Quota.
- Quota Compensation.
- Overtime.
- Availability.
- Time Recording.
- Time Events.
- Time Transfer.
- Employee Remuneration.
- Maternity Leave.
- Military Service.
- Additional Absence Data.
- Flextime.
- Activity Allocation.
- Cost Assignment.
- External Services.
- Different Payment.
- Time Data Collection.
- Employee Expenditure Collection.
- Logistics Integration.
- Time Evaluation Configuration.
- Cluster B1.
- Cluster B2 (Time Evaluation Results).
- Internal Tables.
- Time Evaluation with Clock Times (Schema TM00).
- Schemas.
- Functions.
- PCRs.
- Operations.
- Features.
- Time Manager’s Workplace.
- Time Management Pool.
- Cross-Application Time Sheet.
- Incentive Wages.
- Shift Planning.
- Utilities.
- Index.
- Good Governance.
- World Government.
- World Language.
- Good Governance.
- City without Traffic Lights.

Latest Print 2014 / 756 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4065-7 / ₹595.00
BUSINESS AND MANAGEMENT

SAP HR OM, PD and Training: Technical Reference and Learning Guide

P.K. AGRAWAL, formerly Program Manager at Tata Technologies Limited, Pune.

This book explains all the concepts underpinning the Organizational Management (OM), Personnel Development (PD) and Training and Event Management modules of SAP HR. It is a comprehensive technical manual which explains every single node of User Menu and the Configuration. The book first gives an overview of a concept explaining what it is, how it is used and how it relates to other concepts. It then explains its properties, which are fields in a configuration node.

This book is designed to be used both as a reference manual and a learning guide. As a learning guide, it offers four views, each for a different target audience:

• It can be read from the Senior Management's perspective to gain a broad understanding of the subject and what SAP can do for them.
• Business Process Owners can achieve a higher level of understanding by getting to know more of SAP concepts and how to perform different tasks in SAP.
• Users can acquire a thorough understanding of different tasks and concepts underlying them.
• Functional Consultants and proficient users can read the book to gain a complete understanding of the system.

As a technical reference, the book can be used to locate the relevant material through the Table of Contents, Index, ‘SAP Menu’ and ‘Implementation Guide for R/3 Customizing (IMG)’. The last two follow the Table of Contents. If the reader is in SAP’s User Menu or Configuration, the chapter number for these nodes can be found in ‘SAP Menu’ and ‘IMG’. If a node is not covered in the book the reason for it is also mentioned.

The implementation of SAP HR OM, PD and Training and documentation can also be guided by the structure of this book.

A Better World: There is a lot that we can do to make our World a better World, just as we discover better ways to support our businesses. Read short articles inside on some of the ideas of World Integration and Improvement Initiative.

• World Government
• Good Governance
• World Language
• City without Traffic Lights

Books on SAP HR: The following other books on SAP HR have also been published by PHI Learning, New Delhi:
1. SAP HR Time Management
2. SAP HR Personnel Administration and Recruitment
3. SAP HR India Payroll


Latest Print 2014 / 784 pp. / 17.8 x 23.5 cm

PHI Learning: Publications
Statistics Made Simple: Do It Yourself on PC, 2nd ed.

K.V.S. SARMA, Professor, Department of Statistics, Sri Venkateswara University, Tirupati.

This textbook, now in its second edition, is designed for the students opting for courses in research methodology. It is also intended for the postgraduate students of population studies, sociology, economics, psychology and anthropology.

Written in a reader-friendly style, this thoroughly revised text teaches the students how to handle data and get the desired output through commonly available software like Microsoft Office 2007 and Excel using a step-by-step approach. Real-life data have been analyzed and illustrated through graphs, tables and screenshots. An entire chapter is devoted to Crystal Reports (CRP) software, which is currently used for rendering custom-designed reports from databases.

This book will also benefit all those professionals who are not aware of the use of computer for data handling and statistical analysis.

NEW TO THIS EDITION

• The earlier chapter on Data Handling and Statistics through FoxPro has been replaced by a new chapter titled Data Handling and Statistics through MS-Access.
• Chapter 10 on FoxPro Programming for Quick Statistics has been replaced by a new chapter titled Data Analysis using Crystal Reports.
• Statistical analysis with SPSS has been thoroughly revised.
• Several new examples and exercises have been included.

CONTENTS:


Practical Guide to Human Resource Information Systems

SATISH M. BADGI currently works for a global Management and IT consulting company where he continues to play a global role in HRIT domain.

Practical Guide to Human Resource Information Systems (HRIS) is a comprehensive presentation on global HRIS implementations and the associated challenges faced in such global projects. It begins with the basic HR and IT concepts and guides the readers through the complete life cycle of HRIS applications, spanning from planning to execution. Both HR and IT play an equal role in the development of HRIS applications. This book will help students from both HR and IT streams in assimilating the intricacies of implementation of HRIS projects.

HR is one of the most popular ERP product implementation topics in today’s business world. Its implementation needs a practical discussion using examples from real world. The examples, the case study and discussions in the book follow an international approach rather than discussing only a single country HRIS implementations. A real-life case study that flows through various chapters of the book brings out challenges in the implementation of HRIS specific projects.

In today’s global economy, HR is changing fast and dives into areas such as strategy outsourcing, mergers and acquisitions (M&A). This book covers all these areas and other topics that are relevant to today’s HR world, providing more value to the readers. It provides illustrations to assist readers in visualizing the topics discussed and in developing a sound understanding of the integration and data aspects of HRIS systems.

This book will be useful as a text for a course in HRIS wherever prescribed for the MBA (HR) and MBA (IT) students. The book encourages self-directed study and thought process, based on references provided at the end of each chapter, and hence will also be useful to consultants, HR professionals, and IT professionals working with HR departments.


Cyber Laws and IT Protection

HARISH CHANDER, formerly Professor-in-Charge, Law Centre II, Faculty of Law, University of Delhi.

India has emerged as a hub of the IT industry due to the phenomenal growth of the IT sector. However, this huge growth rate has brought with it the inevitable legal complications due to a switch from paper-based commercial transactions to e-commerce and e-transactions. This book discusses the legal position of Information Technology (IT), e-commerce and business transaction on the cyberspace/Internet under the Information Technology (IT) Act in India.

Divided into five parts, Part I of the text deals with the role of the Internet, e-commerce and e-governance in the free market economy. Part II elaborates on various laws relating to electronic records and intellectual property rights with special reference to India. Efforts are being made internationally to rein in cyber crimes by introducing stringent laws, Part III deals with various rules and regulations which have been introduced to get rid of cyber crimes. Part IV is devoted to a discussion on various offences committed under the IT Act, penalties imposed on the offenders, and compensations awarded to the victims. Finally, Part V acquaints the students with the miscellaneous provisions of the IT Act.

This book is designed as text for postgraduate students of Law (LLM) and undergraduate and postgraduate students of Information Technology [B.Tech./M.Tech. (IT)] and for Master of Computer Applications (MCA) wherever it is offered as a course. Besides, it will prove handy for scholars and researchers working in the field of IT and Internet.


Latest Print 2012 / 260 pp. / 16.0 x 24.1 cm

Latest Print 2013 / 284 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-4570-6 / 325.00
BUSINESS AND MANAGEMENT

Business Computing (IT Management)

IT Services Business Management: Concepts, Processes and Practices
SANJIVA SHANKAR DUBEY is an expert on IT strategy and Innovation. He has spent over 25 years in IT while working with IBM and Tata Steel.

In IT Services, the businesses are managed with a customer-centric approach. This book, through various concepts, processes and stages, explores the need and framework of IT Services business, and how they are managed to deliver services par excellence.

The book comprehensively explains how ITSE (IT Services Enterprises) strategies are analyzed and formulated with the help of three-dimensional cube—customer-centricity, niche vs. end-to-end offering and disruptive innovation vs. gradual innovation. The book further teaches that a good marketing must start with an integrative vision of the ITES Enterprise, and reveals how a customer plays a dominant role in co-creating IT Services. It also details on the various stages of sales cycle called Sales funnel, and how the sales team manages the sales opportunity’s progress.

The concluding chapters discuss the aspects needed for the survival and growth of the ITSE firms; the factors that propel growth—Demand, Quality of the business environment and Supply response of an enterprise. It also shows how the future of the IT Services depend on the combination of—Business environment, Information and Communication Technology (ICT) trends, IT Services business model trends and IT governance trends.

The book is well-supported with the diagrams and illustrations to explain the concepts clearly. The Review Questions are also incorporated to analyze the students’ learning skills.

The book is intended for the postgraduate students of business administration, MCA and MSc (IT). Besides, the book will also be beneficial for the IT Services executives and managers.


Latest Print 2012 / 280 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4531-7 / 250.00

IT Service Management: A Concise Study
S.A. KELKAR, Former Adjunct Professor at Indian Institute of Technology Bombay, serving both in the Department of Computer Science and Engineering and Shailish J. Mehta School of Management.

Today, besides focusing on technology and internal organization of the company, it has become important for IT service providers to focus on their service quality and relationship with customers. This book has been designed to equip them with the knowledge, skills and attitudes to deliver quality services and maintain strong business relations with their customers. Presented in concise form, the book not only discusses the essentials of theory and best practices followed in the industry but also emphasizes the service improvement process.

The book is aimed at students of Computer Science and Engineering, Information Technology, MCA, M.Sc. (IT) and MBA. Besides, it is equally useful for IT professionals and Trainers.


Latest Print 2012 / 588 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4484-6 / 495.00
One of the most important uses of computers is (as an aid to managers) to provide up-to-date information to efficiently run their organizations. Of the total number of computers installed in the world today, over eighty percent are used in organizations for management information systems. It is thus very important for all students of management, commerce and computer science to know how to design computer-based information systems to aid management. This introductory text gives a lucid, self-contained presentation to students on how to analyse and design information systems for use by managers.

Information Systems Analysis and Design (also known as System Analysis and Design) is a compulsory subject for MCA, BCA, B.Com. and B.E. students of Computer Science and Information Technology. This book covers the syllabus of this course and that of the DOEACC (Level A) examination.

Thoroughly classroom tested and evolved out of twenty years of teaching Information Systems Design course at IIT Kanpur and IISc., Bangalore, this book presents real Indian examples.

In this third edition every chapter has been updated, besides the addition of a new chapter on Use Case Method to reflect the rapid changes taking place in designing information systems.

This book has been used to prepare learning material for the course Systems Analysis and Design for the National Programme for Technology Enhanced Learning of the Ministry of Human Resource Development, Government of India. The author has also delivered 40 lectures on this topic which may be heard in YouTube. This book also contains supplementary materials like PPTs and objective questions with explanation for each incorrect choice which are available on www.phindia.com/rajaraman_ADIS

BUSINESS AND MANAGEMENT

Business Computing (Management Information Systems)

Data Mining: Techniques and Trends

N.P. GOPALAN, Professor, Department of Computer Applications, National Institute of Technology, Tiruchirapalli.
B. SIVASELVAN, Assistant Professor, Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, IIT Madras Campus, Chennai.

In today’s world of competitive business environment, there is a driving need to extract hidden and potentially meaningful information from large databases for effective decision making. This compact book explores the concept of data mining and discusses various data mining techniques and their applications. It is primarily designed for the students of Computer Science and Engineering, Information Technology, Computer Applications, and Management.

Written in a student-friendly style, the book describes the various phases of data mining, architecture of a data mining system, and the types of knowledge that can be mined from databases. It elaborates on different data preprocessing techniques such as cleaning, integration, transformation and reduction. The text then explains the various data mining techniques such as association rule mining, data classification and clustering. The book adopts an algorithm-centric approach presenting various algorithms for these data mining techniques. Finally, the text ends with an exhaustive discussion on multimedia data mining (MDM).

KEY FEATURES
- Illustrates the concepts with the help of various figures and examples.
- Provides a summary at the end of each chapter for quick revision of key points.
- Offers chapter-end questions for self-evaluation.


Latest Print 2009 / 144 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3812-8 / ₹ 125.00

Decision Support Systems

V.S. JANAKIRAMAN, Professor of Computer Science, PSG College of Arts & Science, Coimbatore.
K. SARUKESI, Professor of Computer Science, Bharathiyar University, Coimbatore.

This compact and easy to read book describes in detail the basic principles of Decision Support Systems (DSS). The book also gives a comprehensive account of the various models used in decision making process, the many facets of DSS and explains how they are implemented. Further, it discusses the significance of business reengineering, the role of client-server technology, Internet and Intranet, and analyzes the concepts of Database Management Systems (DBMS), model management and various GUIs.

Designed as a textbook for the undergraduate and graduate students of computer science and management, this book would also be of great help to the practising professional.


Latest Print 2009 / 236 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-1444-3 / ₹ 150.00

PHI Learning: Publications
G.K. GUPTA, Adjunct Professor of Computer Science at Monash University, Clayton, Australia. Professor Gupta is a Fellow of the Association of Computing Machinery (ACM), a Fellow of the Australian Computer Society (ACS) and a Senior Member of the IEEE.

The field of data mining provides techniques for automated discovery of valuable information from the accumulated data of computerized operations of enterprises. This book offers a clear and comprehensive introduction to both data mining theory and practice. It is written primarily as a textbook for the students of computer science, management, computer applications, and information technology.

The book ensures that the students learn the major data mining techniques even if they do not have a strong mathematical background. The techniques include data pre-processing, association rule mining, supervised classification, cluster analysis, web data mining, search engine query mining, data warehousing and OLAP. To enhance the understanding of the concepts introduced, and to show how the techniques described in the book are used in practice, each chapter is followed by one or two case studies that have been published in scholarly journals. Most case studies deal with real business problems (for example, marketing, e-commerce, CRM). Studying the case studies provides the reader with a greater insight into the data mining techniques.

The book also provides many examples, review questions, multiple choice questions, chapter-end exercises and a good list of references and Web resources especially those which are easy to understand and useful for students. A number of class projects have also been included.


INDRAJIT CHATTERJEE is presently the Vice Principal of IIAS School of Management, Siliguri Campus, West Bengal.

This introductory book on Management Information Systems (MIS) is designed to serve as a text for the students of management (BBA and MBA) and computer applications (BCA and MCA). Today, many management information systems are in widespread use by the managers at operational, middle and senior levels. This book will be equally useful to working executives and professionals who wish to grasp the essentials of management information systems.

This book discusses all the major areas in information systems with contemporary issues and their effects on business and organization. The main focus is on practical orientation and application of information systems and the emphasis is on real business scenarios. Each chapter provides spotlights on organization, technology or management related to the topics discussed.

The book provides a broad treatment of the core topics of MIS, namely databases, data communication, e-commerce, supply chain management, customer relationship management, decision support systems, knowledge management, and also the ethical and social issues involved in information systems. It also discusses the development methodologies of system analysis and design which enable the actual information systems to be built to meet the needs of an organization. Case studies based on management of business information provide the students with insight into the actual processes involved.

It is widely recognized that the knowledge of information systems is essential in today’s business organisations to survive and prosper. This book, in its second edition, provides students with a conceptual framework to understand information systems. The focus of information systems (irrespective of the level of use of information) is on producing quality information needed to facilitate decision making. The objective of this book is to capture the material on information systems and organize it around a framework that offers a current and relevant knowledge based on information system by providing just the adequate amount of material in a concise format.

The book is organized in three parts: (i) Information systems basics, (ii) Managing with information and (iii) Managing information resources. Though the main structure of the second edition remains the same, the chapters have been updated and revised as per the recent development in the fields of information technology. Besides this, a new chapter is added to explain the concepts like e-business, Customer relationship management (CRM), Enterprise resources and planning (ERP) and Supply chain management (SCM), comprehensively.

Intended for the students of computer applications (BCA and MCA) and management (BBA and MBA), and the undergraduate students of Computer Science engineering, the book is equally useful for the busy professionals who wish to grasp the essentials of management information systems, without attending a formal instructional course.


T.A. ADIKESAVAN, Management Consultant and a Visiting Faculty, University of Madras, Chennai.

This substantially enriched second edition of the book includes evolution of IT applications in business over last five decades, to enable readers in understanding how IT offers newer solutions to modern business. It also discusses the knowledge management systems, various e-business models including e-marketing, Internet architecture and business technology management (BTM), where the focus is on strategic exploitation of IT.

The unique arrangement of the contents in the book exposes the readers from the basics of IT (hardware, software and data) to all potential IT applications viz., data and transaction processing, MIS and EIS, business integration, CRM, business intelligence, decisions support systems, data warehouse and data mining, which bring tactical and strategic benefits to business. How technology benefits business, is the core of this book.

The book also explains generic contributions of IT to business, enormity of business processes and management functions, what the business expects from the technology, systems audit and controls and software engineering and various techniques which lead to reliable, accurate, and secured deployment of IT applications in business.

The text is highly practice oriented and is illustrated with a number of real-life examples and case studies. How IT resources are to be acquired and managed, are also discussed, in great detail.

The book is designed for the postgraduate students pursuing business management and computer applications. Besides, the managers in all business verticals and functions will also find this book of immense use to them.

BUSINESS AND MANAGEMENT

Management Information Systems in the Knowledge Economy, 2nd ed.
P.T. JOSEPH, S.J., Professor of Information Systems and Organizational Behaviour at the Xavier Institute of Management Bhubaneswar (XIMB). Currently, he also holds the position of the Director of XIM Bhubaneswar.
SANJAY MOHAPATRA, Professor of Information Systems at the Xavier Institute of Management Bhubaneswar (XIMB).

The textbook, now in its Second Edition, includes a new chapter on ERP as a Business Enabler. The text continues to provide a comprehensive coverage of business applications of management information systems in today’s new era of knowledge-based economy where the value of a firm’s knowledge assets has become a key source that can be leveraged into long-term benefits. The text focuses on the information systems requirements vis-à-vis management perspectives required in business environment. The technology innovations are covered, with particular emphasis on Data Management Systems, Decision Support and Expert Systems. On the other hand, several business applications such as e-commerce and mobile applications, made possible only because of continuing innovations in the field of information and communications technology (ICT) are thoroughly treated in the text. Besides, the book covers crucial issues of information security, and legal and ethical issues which are important both from the point of view of technology and business.

The book uses case discussions in each chapter to help students understand MIS practices in organizations. The cases also enable students to grasp how a systemic approach to every functional aspect of management can lead to formulating technology-based strategies in line with corporate goals.

Primarily intended for undergraduate and postgraduate students of management (BBA/MBA), the knowledge and information provided in this book will also be of immense value to business managers and practitioners for improving decision-making processes and achieving competitive advantage.


Latest Print 2014 / 560 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4876-9 / € 475.00

Object-Oriented Analysis and Design Using UML: An Introduction to Unified Process and Design Patterns

MAHESH P. MATHA, NE Technologies India Pvt. Ltd., Salcette, Goa.

A modern computer program, such as the one that controls a rocket’s journey to moon, is like a medieval cathedral—vast, complex, layered with circuits and mazes. To write such a program, which probably runs into a hundred thousand lines or more, knowledge of an object-oriented language like Java or C++ is not enough. Unified Modelling Language (UML), elaborated in detail in this book, is a methodology that assists in the design of software systems.

The first task in the making of a software product is to gather requirements from the client. This well-organized and clearly presented text develops a formal method to write down these requirements as Use Cases in UML. Besides, it also develops the concepts of static and dynamic modeling and the Unified Process that suggests incremental and iterative development of software, taking client feedback at every step. The concept of Design Patterns which provide solutions to problems that occur repeatedly during software development is discussed in detail in the concluding chapters. Two appendices provide solutions to two real-life problems.

Case Studies, mapping of examples into Java code that are executable on computers, summary and Review Questions at the end of every chapter make the book reader friendly.

The book will prove extremely useful to undergraduate and postgraduate students of Computer Science, Information Technology, and Master of Computer Application (MCA). It will also benefit professionals who wish to sharpen their programming skills using UML.


Latest Print 2014 / 364 pp. / 17.8 × 23.5 cm
BUSINESS AND MANAGEMENT

Business Computing (MANAGEMENT INFORMATION SYSTEMS)

Workbook on Systems Analysis & Design, Revised 2nd ed.

VINOD KUMAR GARG, Professor of Information Management at S.P. Jain Institute of Management and Research, Mumbai.
S. SRINIVASAN, Project Manager of Deloitte Consulting, Hyderabad.

This second edition, provides step-by-step approach to the fundamentals of systems development in interactive hands-on and stimulating learning environment. It focuses on object-oriented analysis and design and approach to web application development. To enhance understanding of the subject, all the topics of the first edition have been reviewed and expanded.

The book first outlines the steps followed in analysis and design and then illustrates them with examples. The end-of-chapter practice exercises provide an incremental framework to reinforce the hands-on nature of learning.

It is useful for students and instructors as well as for the systems analysts and designers of IT companies to solve their day-to-day systems related problems.

KEY FEATURES
- Provides hints on how to use techniques of SSAD in actual practice.
- Gives a comprehensive case study illustrating how the various application modeling tools could be applied in an integrated manner to a real life situation.
- Presents additional chapters on OOAD and web development.
- Supplies question bank with more than 50 carefully selected questions on various concepts.

CONTENTS:

Latest Print 2009 / 252 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-1724-6 / ₹ 175.00

Network Security and Management, 3rd ed. (with CD-ROM)

BRIJENDRA SINGH, Professor, Department of Computer Science, University of Lucknow, Lucknow.

Written in an easy-to-understand style, this textbook, now in its third edition, continues to discuss in detail important concepts and major developments in network security and management. It is designed for a one-semester course for undergraduate students of Computer Science, Information Technology, and undergraduate and postgraduate students of Computer Applications.

Students are first exposed to network security principles, organizational policy and security infrastructure, and then drawn into some of the deeper issues of cryptographic algorithms and protocols underlying network security applications. Encryption methods, secret key and public key cryptography, digital signature and other security mechanisms are emphasized. Smart card, biometrics, virtual private networks, trusted operating systems, pretty good privacy, database security, and intrusion detection systems are comprehensively covered. An in-depth analysis of technical issues involved in security management, risk management and security and law is presented.

In the third edition, two new chapters—one on Information Systems Security and the other on Web Security—and many new sections such as digital signature, Kerberos, public key infrastructure, software security and electronic mail security have been included. Additional matter has also been added in many existing sections.

KEY FEATURES
- Extensive use of block diagrams throughout helps explain and clarify the concepts discussed.
- About 250 questions and answers at the end of the book facilitate fruitful revision of the topics covered.
- Includes a glossary of important terms.

CONTENTS:

Latest Print 2012 / 420 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4497-6 / ₹ 325.00
This book, in its third edition, is aimed at emphasizing the fundamental concepts associated with IT Project Management from a balanced perspective of theory and practice. By presenting the information in an abstracted form, this text guides the students through all phases of project life cycle, i.e. initiation, planning, execution, monitoring and control, and closure.

Besides such general management activities, this book comprehensively deals with all critical dimensions of project such as scope, time, cost, quality, human resources, communication, risk, procurement, and integrations in order to enhance the reader’s understanding of technical competencies required in project management.

NEW TO THIS EDITION

Incorporates all the changes brought about in PMBOK 2008 (Fourth Edition) and ISO9000:2008

Though the basic structure of this book remains the same, several chapters have been modified and reorganized according to the latest trends

This book is well-suited for an academic course (one semester) on IT project management or for conducting an equivalent training programme for IT professionals. IT project managers, who are aspiring to get appropriate certification course based on PMBOK 2008 (Fourth Edition) from PMI, USA, will be greatly benefited by reading this book. Besides, this book will be equally useful for the software professionals who wish to grasp the essentials without attending a formal instructional course on the subject.

Since liberalization, Indian economy is going through some dynamic changes. From a primarily closed agrarian economy, India has become service-oriented open economy, becoming more and more susceptible to economic fluctuations.

This comprehensive book, in its third edition, continues to equip the readers with the necessary skills to assess and analyze the evolving economic scenario in India and world over. The new edition has been thoroughly revised and updated to incorporate the recent changes taking place in Indian and global economic environment. Every chapter is incorporated with a section on Understanding Economic Environment (UEE), in which the Indian economic environment is compared with the economic environment of its neighbouring countries, emerging markets and major players in the world economy.

All chapters are well-supported with illustrative examples and cases to provide an analytical insight to the topics. The chapters also include the topic Implications for Managers, in which implications of a particular aspect of an economy are summarized for the managers. Besides, for an easy assessment of the data, most of the quantitative information is presented in a graphical form rather than in the conventional tabular format.

Designed primarily as a textbook for the postgraduate students of management and commerce, this book is useful for the practising managers and policy makers as well.

KEY FEATURES
- Includes illustrations using latest data (upto 2011)
- Provides several numerical problems to strengthen the quantitative aspect of the subject
- Each chapter concludes with a Case Analysis to support the chapters with the applicative tools
- Companion website www.phindia.com/veenapailwar provides useful resources for the teachers as well as for the students and has been updated as per the current edition


Business Environment

VEENA KESHAV PAILWAR is a faculty at Institute of Management Technology (IMT), Nagpur.

Designed primarily as a text for undergraduate and postgraduate students of management and commerce, this comprehensive and well-organized book equips the readers with the knowledge to analyze the domestic and global business environment. The focus of the book is on the assessment of the evolving business scenario using analytical underpinnings and latest data.

This book clearly brings out the implications of changes in socio-economic and legal environment of business, and covers business environment by tracking changes in national income, inflation, fiscal deficit, money supply, exchange rate, balance of payment and many other economic variables. Besides, it briefs on legal aspects, deliberates on demographic changes and changes in technical and natural environment of business.

Besides students, practising managers and policy makers will also find the book as a useful reference.

Companion Website: This text is supported by the companion website: www.phindia.com/veenapailwar-BE/ containing useful resources for the teachers and study aids for the students.

Instructors’ Resources: To support the teaching efforts the website contains—Answers of the end of the chapter Numerical Problems with explanation, More than 1000 crisp, clear and colourful PowerPoint Slides and more than 1000 Multiple Choice Questions.

Students’ Resources: To strengthen the understanding of the students on the subject the website resources comprise—Interactive Multiple Choice Questions and hints for solving chapter-end Numerical Problems.

BUSINESS AND MANAGEMENT

Economics (Business Environment)

Business Environment: Indian and Global Perspectives

FAISAL AHMED, Associate Professor of International Business and Chairman of the International Business Area at FORE School of Management, New Delhi.

M. ABSAR ALAM, Economist and Consultant with Asian Institute of Transport Development (AITD), a New Delhi-based think tank having special consultative status with the United Nations.

This book carries a holistic approach on the business environment (both Indian and global) with a contemporary and pragmatic appeal for learners. The text provides an incisive insight into the subject via simple, elegant and explicit presentation that ties theory logically and rigorously with the practical aspects bearing on business environment.

Divided into 24 chapters, the book dexterously assimilates the national as well as global perspectives to enhance a broader understanding of the concepts and their applications. The chapters on Contemporary Perspectives, Economic Systems, Planning and Reform, Industrial Policies, Monetary Policy, Legal Framework, and so on, explicate the Indian business environment and its scope. Furthermore, its specialised chapters on global perspectives like International Law, International Organisations, WTO Regime, Cross-cutting Issues in International Environment, Foreign Direct Investment (FDI), Country Risk and Political Risk Analysis, Doing Business in Select Markets, and so on, are comprehensive in terms of coverage and approach.

This is purely a text intended for the undergraduate and postgraduate students of Commerce and Management. Besides, the book is of immense use for the aspirants of civil services, officials and professionals working in government ministries, embassies in India, Indian missions abroad, Chambers of Commerce, NGOs and policy think tanks.

HIGHLIGHTS OF THE BOOK
- Each chapter commences with an opening case, which emphasises the topic of importance, and ends with a closing case that helps in satisfying a learner from the point of view of understanding the chapter.
- Several boxes are incorporated in the text, which carry practical examples and experience to support in-depth learning.
- Enormous illustrative figures, tables and exhibits make the reading more fruitful and enriching.
- Case questions and review questions help in checking the learner’s ability to understand the basic concept of the chapter.
- The text is supported by the companion website http://phindia.com/ahmed containing useful resources for the teachers and study aids for the students.

CONTENTS:

Latest Print 2014 / 432 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-5022-9 / 450.00
BUSINESS AND MANAGEMENT

Managerial Economics, 3rd ed.

YOGESH MAHESHWARI,
Professor of Finance with the Indian Institute of Management Indore.

For courses in managerial economics, this textbook, now in its third edition, is specifically designed for the students of management, commerce and economics to provide them with thorough understanding of economic concepts and methodologies and the economic environment influencing managerial decisions.

The book first lays a sound theoretical foundation of basic concepts, definitions, and methodologies of economics, being an essential prerequisite for students to understand the theory of managerial economics. All the basic principles are introduced with mathematical complexity kept to minimum—essentials of applied mathematics needed for comprehending the underlying ideas of models and theories of economics are covered.

The book then moves on to systematically enumerates the various tools of analysis such as demand analysis, cost analysis, elasticity of demand, production analysis and price theory, and highlights their importance in managerial decision making through the concept-example format, wherein a concept discussed is immediately followed by a practical situation so that the reader can understand its application. The end-of-chapter questions reinforce a deeper understanding of the concepts introduced in the text.

An exclusive chapter on linear programming emphasizes the importance of this mathematical tool in finding optimal solutions like lean and virtual manufacturing, enterprise resource planning, and functional information systems. An exclusive chapter is devoted to concepts and tasks of software reengineering.

NEW TO THE THIRD EDITION

• Revised and expanded coverage of evolution of economic thought, and basic economic terms.
• An enriched inclusion of demand forecasting techniques, and the Cobb-Douglas production function.
• An extensive illustration of the commonly used pricing methods and market power.
• Value addition to the existing list of case studies to enhance students' understanding of the theoretical concepts.


Business Process Reengineering: Text and Cases

R. RADHAKRISHNAN,
Vice-Chancellor, Anna University, Coimbatore.
S. BALASUBRAMANIAN,
Director, Centre for Intellectual Property Rights, Anna University, Coimbatore.

This textbook explores the fundamental principles of Business Process Reengineering (BPR). The express aim of the book is to address the needs of MBA students opting for courses in ‘Information Technology Management’ or ‘Operations Management’, MCA students who opt for Business Processes as an elective, and students of BE/B.Tech Mechanical Engineering and Production Engineering for courses in Process Engineering/Automation/Management System Design. The book provides them with the concepts, methodologies, models and tools needed to understand and implement BPR.

In a nutshell, the book offers a step-by-step presentation of the practical framework and management techniques needed to achieve engineering solutions for implementation of BPR in an organization. The initial chapters introduce the reader to the need for BPR and its utility in relation to IT and manufacturing. The middle chapters cover the methodology, success factors, barriers, and the technologies that are relevant for BPR implementation. The latter chapters present solutions like lean and virtual manufacturing, enterprise resource planning, and functional information systems. An exclusive chapter is devoted to concepts and tasks of software reengineering.

Aided by extensive illustrations, end-of-chapter review questions, as well as a chapter consisting entirely of case studies, this book will help students develop a rich, multifaceted perspective, to enable them to handle complex management and engineering problems.

The book will be useful to students in practically all branches of engineering, not just mechanical/production/industrial engineering.


Latest Print 2014 / 288 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3567-7 / 295.00
BUSINESS AND MANAGEMENT

General Management (BUSINESS ANALYSIS)

Business Analysis: Visualizing Business Processes and Effective Software Solutions

PRADEEP HARI PENDSE is presently at the Welingkar Institute of Management Development & Research, Mumbai.

With the growth of the industry and the resulting size and complexity of IT projects, there is an increasing trend to separate the technical roles associated with the design of IT solutions from the customer focused roles and the project management roles. The role of the Business Analyst (BA) is that of a person who interfaces with the customers to understand their requirements. This role is distinct from that of a technical designer of software solutions who works on the basis of the requirements gathered by the BA.

Most leading IT companies today have Business Analyst as a distinct role. The job requirements depending on the nature of the business may be that of a domain consultant, a solution architect, a relationship manager, a pre-sales consultant, a functional consultant, and an accounts manager, etc.

This book explains the core aspects of the business analysis. It explores the knowledge areas required of a Business Analyst’s role in various organizations. It integrates knowledge from various conventional and contemporary areas and uses their tools, techniques and concepts to specific roles which may a Business Analyst may have to play in industry. In a nutshell, the book provides an appreciation of how several of the existing tools and techniques can be used effectively to ensure success in managing software requirements in terms of customer needs and expectations. A number of case studies have been used to demonstrate the application of conceptual frameworks to real life examples.


Latest Print 2010 / 272 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3528-8 / 225.00

The Ninth Edition of this well-established text, while retaining the contents and style of the earlier editions, continues to discuss the basic skills of management and leadership. The assumption of the book is that the human person is by nature a manager and has leadership and managerial skills that can and should be continually developed. These basic skills are: reading, writing, learning, speaking, interviewing, training, deciding, problem-solving, managing conflict, and motivation. And in this book, Fr. McGrath, with his masterly skills and wealth of experience, tells how these skills can be fully developed and mastered. Constant use of pointers, tips, exercises and questionnaires, supplemented by hand drawings, make this book exceptionally reader friendly.

WHAT THE REVIEWERS SAY

Hundreds of managers, teachers, and HRD personnel and others in India and abroad have benefited from this storehouse of practical wisdom, lucidly and creatively written.

—T.A. MATHIAS, Professor, and Former Editor, Management and Labour Studies, XLRI

Extremely good and useful... one of the best in the genre... a great service....

—V. GIRIRAJ, IAS

Basic Managerial Skills is an excellent handbook for young managers and management students.

—Prof. BISWAJEET PATTANAYAK, Former Professor, IIM Indore

This is a remarkable book on perfectible skills of management and leadership. We have made it compulsory reading for all students of management at IMIS. Fr. McGrath says profound truths on management which are easy to read and understand.

—Prof. K.C. PADHY, Director, Institute of Management & Information Science, Bhubaneswar


Latest Print 2012 / 840 pp. / 16.0 × 24.1 cm

PHI Learning: Publications
Business Ethics and Value Systems

H.C. MRUTHYUNJAYA, Consultant (Corporate Systems) serving various organizations.

This comprehensive and well-organised book deals with some of the basic issues associated with business ethics and value systems. It presents the views of different schools of thought on this subject and dissects the phenomenon of corruption to expose its root causes. The book provides a critical analysis of this social epidemic that forces corporates to become corrupt and remain unethical. Besides, it describes a few popular ethical theories, some of the key issues that affect ethical decision process and the role of total quality management in ensuring practice of good workplace ethics.

Primarily intended for the postgraduate students of management and commerce, the book can also be used beneficially by practicing professionals.

KEY FEATURES
• Presents more than forty live cases that show a cross-section view of different types of unethical practices.
• Gives model ethical codes for a few professions.
• Provides spreadsheets to enable satisfactory compliance with legal and statutory requirements.

CONTENTS:

Latest Print 2013 / 760 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4631-4 / ` 525.00

Engineering Ethics
Includes Human Values

M. GOVINDARAJAN, former Assistant Professor, Department of Mechanical Engineering, Anna University, Chennai.

S. NATARAJAN, former Professor and Head, Department of Mechanical Engineering, Anna University, Chennai.

V.S. SENTHILKUMAR, Associate Professor, Anna University, Chennai.

Today, more and more organizations are realizing the importance of practising ethics in their business dealings. And the engineering profession is no exception to this. For, any policy or practice that gives a go-by to professional ethics—which essentially entails fair and transparent dealings based on sound moral principles—cannot enjoy the confidence of the customer for long. It is in this context that a book on Engineering Ethics is so significant.

This compact and systematically organized text discusses, with great skill and expertise, the various approaches to the study of ethical behaviour, ethical theories, the moral dilemmas the professionals are faced with, value-based ethics and the engineers’ responsibility for safety and risk, collegiality and loyalty. Besides, the responsibilities of engineers in organizational setting, and global issues such as environmental ethics, computer ethics, and Intellectual Property Rights (IPRs) are detailed and delineated.

The Case Studies lend a practical orientation to the book, and the Review Questions sharpen the analytical skills of the students. This is a must have book for students of engineering and management. Besides, professional engineers and managers will find a wealth of information in this timely study.

CONTENTS:

Latest Print 2013 / 204 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-2578-4 / ` 175.00
BUSINESS AND MANAGEMENT

General Management (BUSINESS ETHICS)

Professional Ethics and Human Values

M. GOVINDARAJAN, former Assistant Professor, Department of Mechanical Engineering, Anna University, Chennai.
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This systematically organized text opens with an introduction to Human Values and discusses, with great skill and expertise, the various approaches to the study of ethical behaviour, ethical theories, value-based ethics and the engineers’ responsibility for safety and risk, collegiality and loyalty. Besides, the responsibilities of engineers in organizational setting, and global issues such as environmental ethics, computer ethics, and Intellectual Property Rights (IPRs) are also covered in this text.

The Case Studies lend a practical orientation to the book, and the Review Questions sharpen the analytical skills of the students. This is a must have book for the students of engineering and management.


Latest Print 2013 / 144 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4816-5 / £ 150.00

Values and Ethics in Business and Profession

SAMITA MANNA, Professor in the Department of Sociology, University of Kalyani, West Bengal.
SUPARNA CHAKRABORTI, Department of Humanities, Heritage Institute of Technology, Kolkata.

Primarily intended for undergraduate students of all disciplines of engineering and students of computer applications (MCA), this book is a comprehensive exposition of the values and ethical principles that one needs to adopt to become a responsible and accountable professional.

The book is organized into nine chapters that can be seen as addressing the three broad areas of concern—values, ethics, and sustainable development. It first discusses the prevalent concept of values in human society, the various types of values, and the crisis of values that seems to be engulfing contemporary society. The concept of ethics, the various ethical values, and the ethical requirements for a professional in the modern workplace are highlighted in detail. The ramifications of industrialization, the respective roles of science, technology and engineering, as well as the need for preservation of the environment and the use of eco-friendly technologies are explained. Finally, the ethical issues involved in the management of resources are discussed.

A number of case studies have been provided in the book to enable clear understanding of the topics presented. Each chapter contains exercises, in the form of short answer as well as long answer questions, to test the students’ grasp of the underlying concepts.


Latest Print 2013 / 208 pp. / 16.0 × 24.1 cm

E-book

Latest Print 2013 / 144 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4816-5 / £ 150.00
Primarily intended as a text for undergraduate students of Commerce, this book gives a comprehensive analysis of the legal aspects of corporate and compensation laws.

The book begins with an overview of the nature, kind and formation of a company and different kinds of companies. Then it goes on to give a detailed discussion on Memorandum of Association, Articles of Association and Prospectus. Besides, it enumerates the ways by which one becomes a member of a company, and discusses the legal provisions concerning share capital, shares, dividends, interest and bonus shares. Furthermore, it dwells on company management, meetings and proceedings, and provisions regarding investigation of company affairs, the conduct and consequences of winding up of a company and the concepts of corporate governance and producer company. The book concludes with a discussion on the developments in corporate laws, the Depositories Act, 1996, the Workmen’s Compensation Act, 1923, and the Employees’ State Insurance Act, 1948. The Appendices cover Corporate Governance-Voluntary Guidelines 2009, the Workmen’s Compensation Act, 1923-Schedules I-IV and the Employees’ State Insurance Act, 1948-Schedules II and III.

Besides students of Commerce, those pursuing MBA, ICWA, Chartered Accountancy and Company Secretaryship will also find the book extremely useful.

KEY FEATURES

• Gives up-to-date information on the subject.
• Incorporates all the amendments including the latest amendment regarding corporate and compensation laws.
• Illustrations with relevant Case Law reinforce the text.
• Provides Test Questions and Practical Problems.


Labour and Industrial Laws, 2nd ed.

P.K. PADHI, Professor, Xavier Labour Relations Institute (XLRI), Jamshedpur.

This comprehensive and well-organised text, now in its Second Edition, explains, with great clarity and precision, the labour and industrial laws such as the Industrial Disputes Act, the Factories Act, and the Contract Labour Act. While giving a broad perspective of the subject, the text brings out the objectives behind the enactment of every legislation, discusses the relevant case laws and shows how the Constitution is related to labour laws. Formulas for the calculation of compensation for retrenchment, death, permanent disablement are also provided. Legal jargon has been completely avoided so that anyone having some knowledge of the subject can understand these laws with ease.

In this edition, the amendments made in the ID Act, the ESI Act, the Payment of Gratuity Act, the Payment of Bonus Act and the Employees’ Compensation Act have been incorporated.

The book is primarily meant for the undergraduate and postgraduate students of law, management and the postgraduate students of commerce. Besides, students pursuing professional courses such as Company Secretaryship (CS) and Cost Accountancy (ICWA) would also find the book very useful.

The knowledge of business laws is very important for the survival and growth of any organisation. This comprehensive and well-written book, in its Third Edition, introduces the Companies Act 2013, replacing the Companies Act, 1956 (chapter 10). This newly incorporated Companies Act, 2013 is the first major revision in the company law in more than 50 years. This edition brings about the significant changes proposed by the 2013 Act as compared to the 1956 Act. Inclusion of The National Food Security Act, 2013 as chapter 35 is another addition to the book. The book continues to present a thorough discussion of various legal topics such as contract laws, corporate laws, labour legislations, taxation laws and the related acts including the Sale of Goods Act, 1930, the Negotiable Instruments Act, 1881, the Consumer Protection Act, 1986, the Insurance Act, 1938, the Limited Liability Partnership Act, 2008, the Companies Act, 2013, the Foreign Exchange Management Act, 1999, the Information Technology Act, 2000, the Environment Protection Act, 1986, Right to Information Act, 2005, and Right to Education Act, 2009 and other important acts.

The book contains many practical examples and studies of different law cases which makes it more interesting and authentic. In addition, the book provides Review Questions at the end of each chapter. More practical exercises in the form of case studies in the questions section, and format of a number of documents makes the book quite informative.

The book is primarily designed for the undergraduate and postgraduate students of law, management and the under-graduate students of commerce. Besides, students pursuing professional courses such as Company Secretaryship (CS), CA and ICWA would also find the book quite useful.

Change is the law of life. This precept holds for individuals and organizations alike. Radical change, called transformation, is not so frequent. Organizational transformation entails change that encompass the entire gamut of the organization. A successful transformation exercise begins with formulating a set of Objectives at the beginning and ends up with realizing the desired Outcomes. This book delves deep into the intricacies of the life cycle of organizational transformation and explains how it can be managed effectively adopting a systematic and step-by-step methodology. In this well-researched text, the author, J. Satyanarayana, with his vast and varied experience in the field of management and governance, gives a brilliant exposition of managing transformation.

The book postulates the O2O (Objective to Outcomes) framework as a seven-step methodology. O2O, in a sense, is a meta-framework for transformation. It harmonizes and synthesizes altogether 40 sub-frameworks, which include some well-known concepts, such as Porter’s Value Chain Framework, Kaplan and Norton’s Balanced Scorecard, and Hammer’s BPR framework. The author illustrates the O2O framework through a Case Study on Passport Seva Project, designed by him, and being implemented all over India to transform the quality of passport-related services provided to the citizens.

**KEY FEATURES**

- By expounding the O2O methodology, the book addresses the managerial requirements of conceptualizing, designing and implementing major transformation projects.
- The book focuses on the four principal dimensions of transformation, namely, Process, People, Technology, and Business Model while explaining the major concepts.
- The text is interspersed with plenty of examples to illustrate the concepts.
- The book also includes chapter-end review questions to drill the students in self-study.

This text, with its blend of theory and practice, would prove extremely valuable to the students of management. It should also be a valuable reference book to the administrators and management consultants.

**CONTENTS:**


Latest Print 2012 / 296 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-4537-9 / 375.00

PHI Learning: Publications
It is said the future belongs to Communication. And rightly so. For today, more than ever before, the need for effective communication is being felt. This is particularly true of business communication because, organizations in their efforts to excel in business and outdo their competitors, have to be precise and extremely effective in their communication to satisfy all its stakeholders—be they suppliers, distributors, advertisers or customers.

This book on Business Communication, now in its Second Edition, brings to fore the multidimensional aspects of Business Communication—ranging from listening, speaking, developing skill sets, to exhibiting correct body language. The book emphasizes that understanding the perceptions and mindsets of the communicators and the context are crucial for business communication.

This book, which is the outcome of the rich and the vast experience of Dr. Asha Kaul and her interaction with the brilliant young minds at IIM Ahmedabad and other B-schools, should be of immense value to the budding as well as practicing managers. All readers will find this new edition extremely useful, refreshingly different, and delectably delightful.

**What’s New to This Edition**

- Extensive use of examples, anecdotes, and brief case studies to exemplify the points/issues.
- Checklist and Summary which are ready reckoners for a student hard pressed for time yet desirous of learning and change.
- Learning Objectives for each chapter and section, which bring focus to the text.
- Activities in which the student can participate and test communication competence.
- Comprehensive section on exercises at the end of each chapter, which are application oriented and test the student’s grasp of the subject.

BUSINESS AND MANAGEMENT

General Management (Corporate Governance)

Corporate Governance, 3rd ed.

Subhash Chandra Das is a Management Consultant specializing in the areas of human resources and general management.

Due to increased globalization of trade, the business environment in most countries has become very competitive. Businesses have to work hard to find new customers and retain old ones. This has made good corporate governance indispensable to those who want to survive and flourish.

This revised text, now in its Third Edition, continues to discuss the contemporary issues of corporate governance in the wake of changing business ambience. It provides the students and professionals with an understanding of techniques and methods that can be used in practice for introducing effective governance in companies.

The Third Edition incorporates the updated revised SEBI rules and the powers given to it by the Government Ordinance in Chapter 12 (Highlights of SEBI’s Achievements) and Chapter 13 (Special Features of the Companies Amendment Bill, 2012). Besides, a new chapter on Corporate Social Responsibility (CSR) has been included as Chapter 10 which is an important aspect of corporate governance. Case studies on CSR have been discussed which highlight the practice in organizations for treating CSR as a philosophy of the top management.

It is a valuable textbook for the students pursuing MBA, PGDM or MSW courses who are offered corporate governance as the select topic. Besides, practitioners will also find the book useful while reading the text along with the updated legal provisions and this will enable them to take a consolidated view on their decisions on corporate governance related issues.


Latest Print 2014 / 456 pp. / 17.8 x 23.5 cm

Corporate Governance: Codes, Systems, Standards and Practices

Kesho Prasad is a Management Consultant specialized in the areas of human resources and general management.

This compact and concise textbook gives a conceptual, analytical and evaluative study of the principles, codes, systems and practices of corporate governance prevalent in the industrially developed countries as well as the developing nations of the world.

Comming with the introduction of corporate governance, the book explains key conceptual issues pertaining to corporate governance. It provides a detailed description of International and National Committees’ Codes/Recommendations of corporate governance. In order to explore how far these Codes have been put into practice, the book also presents in-depth coverage of corporate governance systems in vogue among nine industrially developed/developing nations around the globe. The text also contains sample study analyses of six Indian industries comprising globally renowned companies listed under BSE Sensex and NSE Nifty. The book concludes with the ‘codes of best practices’ on corporate governance recommended by the author, which may be adopted by the corporate houses all over the world.

Primarily intended for the students of commerce, law and management, the book can be authoritatively used by researchers, professionals, regulatory authorities and policy makers all over the world.


Latest Print 2010 / 380 pp. / 17.8 x 23.5 cm

PHI Learning: Publications
This compact and concise text, now in its third edition, continues to give a clear analysis of the principles and practices of corporate governance—the corporate governance practices prevalent in India as well as in other industrialized countries around the globe.

The book begins with an introduction to corporate governance, and then moves on to describe the evolution of corporate governance system. It gives a detailed description of the principles, philosophy, structure and the process of corporate governance. The text also contains sample study analyses of some listed Indian companies under BSE Sensex and NSE Nifty. Besides, it provides recommendations of various national committees on corporate governance reforms.

In this edition, a new chapter on Corporate Social Responsibility and Sustainability has been added.

Primarily intended for the students of management, law and commerce, the book can also be used by professionals, regulatory authorities and policy-makers.


**NEW TO THE SECOND EDITION**

- Includes the concepts of corporate sustainability, sustainability reporting, and global reporting initiative, corporate governance voluntary guidelines, corporate governance models, new initiatives in governance, etc.
- Incorporates a topic on Board Management in which the role of directors, types of directors, duties and responsibilities of directors, training for the Board, evaluation of board’s functioning, corporate democracy, etc., have been discussed.

**KEY FEATURES**

- Provides CSR practices by Indian corporates.
- Gives an account of the various legislations governing corporate social responsibility.
- Highlights contributions made to CSR by corporates through NGOs.
- Provides guidelines for ethics to be maintained by various professionals.

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V. BALACHANDRAN, Professor, Corporate Secretaryship, School of Management, and former Director of Distance Education, Alagappa University, Karikudi, Tamil Nadu. V. CHANDRASEKARAN is formerly Accounts Manager with The Hindu, Chennai.

The book, now in its Second Edition, continues to deal with various issues and factors underlying the corporate governance and suggests their remedies. The book addresses the contemporary ethical, legal and environmental issues and concepts in the corporate business world. It discusses the various codes of conduct, concepts, guidelines, rules and regulations of various legislations in relation to ethical business practices.

The book is designed for the postgraduate students of Commerce, and Management. It would also be useful to the students of Law, Chartered Accountancy (CA), Company Secretaryship (CS), and ICWA. Besides, it should serve admirably as a reference for corporate professionals, administrators, and practising managers.
H. NANDAN formerly of Umeshchandra College and City College of Commerce & Business Administration, Kolkata.

The new edition of this compact text continues to serve as an essential guide to students and entrepreneurs for establishing a new venture. The book shows the reader, in an easy to understand style, how to mobilize resources, how to tap market opportunities, how to conduct feasibility studies, and how to promote new ventures. Besides, the book discusses in detail the various techniques of product and process development and the method of product pricing. The book is intended primarily as a text for undergraduate students of commerce and undergraduate and postgraduate students of management. It would equally be useful for students pursuing diploma courses in entrepreneurial development. In addition, the book should prove extremely valuable and handy to anyone who wishes to launch his career as an entrepreneur.

NEW TO THIS EDITION
• One exclusive chapter (Chapter 10) on Business Location and its importance.
• New sections added in Chapter 1.

SALIENT FEATURES
• Provides study questions at the end of each chapter.
• Gives in Appendices, detailed information on venture capital funds, offices of Small Industries Services Institute (SISI) as well as patent offices, trademark offices, etc., in various states.
• Acquaints the reader with global organizations, e.g. World Trade Organization (WTO) and World Intellectual Property Organization (WIPO).

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### Managing New Ventures: Concepts and Cases on Entrepreneurship

**ANJAN RAICHAUDHURI** is an entrepreneur-cum-academic and Visiting Professor at the Indian Institute of Management Calcutta, and in-charge of the activities of the Centre for Entrepreneurship and Innovation at IIMC.

This book not only introduces the fundamental concepts of entrepreneurship but also presents the critical issues that an entrepreneur needs to be familiar with for launching, nurturing, managing and harvesting new ventures. The book explains sequentially the life-cycle of a venture, and discusses topics such as opportunity identification, planning, start-up issues, managing growth and harvesting. Case studies are presented featuring real-life dilemmas faced by Indian entrepreneurs in the manufacturing and the service industries, to make the readers familiar with the eco-system confronting Indian entrepreneurs.

The book is ideally suited for students who wish to venture into entrepreneurship as well as for professionals with interest in policy making, investing or consulting.

**KEY FEATURES**
- A list of learning objectives for each chapter and a set of questions at the end are given to assist students.
- Profiles of two leading entrepreneurs are given after each chapter to examine the relevance of the concepts discussed in the book.
- India-centred approach of this text makes it unique and interesting.


Latest Print 2011 / 256 pp. / 17.8 × 23.5 cm  
ISBN-978-81-203-4156-2 / ₹ 250.00

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### Environmental Law and Policy

**ARUNA VENKAT**, Associate Professor of Law at NALSAR University of Law, Hyderabad. She is the Centre Head of Centre for Humanitarian and Refugee Laws. She also heads the Centre on Law and Society at NALSAR.

This book presents a comprehensive account of the various contours of the environmental jurisprudence in India. It covers the Indian constitutional, legislative, administrative and judicial strategies that have shaped the Indian environmental jurisprudence against the backdrop of the various international efforts to control pollution and preserve the global environment. It deals with the constitutional framework provided for the preservation and protection of Indian environment. In this context, the book gives an extensive picture of Indian administrative and legislative policy framework along with the latest developments in the area. The salient and most important feature of the book is its in-depth account of the innovative judicial enforcement of the constitutional and legislative prescriptions as reflected in the catena of judicial decisions including the latest ones. In this respect, the fundamental right to life guaranteed by Article 21 of the Indian Constitution has been given a very liberal interpretation in order to make it the chief constitutional edifice of the Indian environmental jurisprudence and environmental justice in India.

The book is intended for the students of LL.B. and LL.M. It would also be useful to faculty, research scholars, lawyers and other legal professionals.


Latest Print 2011 / 472 pp. / 16.0 × 24.1 cm  
This comprehensive book on environmental management discusses various aspects of environment, the ecosystems, effects of global warming and pollution, and various ways to conserve nature and save environment.

The eight sections of the book virtually are the eight fundamental components which, in one way or the other, play a crucial role in managing the environment. The book begins with the section on Ecology and classification of ecosystems. It then moves onto the next section on Biodiversity, which discusses the Biodiversity Acts. The book progresses by discussing the third most important section on Environmental degradation, its causes, which include global warming, pollution (air, land and water) and prevention and control. India is an agriculture-based economy, and the next section elaborates on the Agro-ecosystem, its management and techniques of sustainable organic farming.

The next sections of the book cover Forest and Wildlife, Waste Management (industrial waste, e-waste and solid waste), Environment Legislation, and Ethical Aspects of Environment. The book is interspersed with real-life cases to give the topics a reasoned approach. Designed as a text for the postgraduate students of management, this book can be equally useful for the undergraduate students of all disciplines.

The Third Edition of this well-received text encompasses the manifold administrative theories and management thought propagated and enunciated by administrative and management thinkers over the past several decades. The text incorporates major additions and revisions to make it more up-to-date, comprehensive and reader-friendly.

The text not only gives a complete and up-to-date analysis of administrative theories, but also introduces the reader to new concepts, approaches and techniques in public administration. Undergraduate and postgraduate students of public administration, and postgraduate students of political science and management should find this fully revised text to be of immense value.

VINOD V. SOPLE, Director at ITM-SIA Business School, Dombivli (Mumbai).

The book presents a comprehensive treatment of Intellectual Property concepts and its applications in Indian industry. Now, in its Fourth Edition, it includes a new chapter on IPR in Biotechnology and numerous cases/casellets in most of the chapters. It provides a strategic framework for IP management, leading to competitive advantage for a business enterprise. Besides explaining the conceptual framework and practices of IP management, the book discusses IP as a strategic tool, its commercial exploitation and strategies for risk management of IP. Web-based material comprising chapter-wise PowerPoint Presentations (PPTs) and Multiple Choice Questions is available at www.phindia.com/sople

This book is primarily intended as a text for postgraduate students of management, students of engineering and those who are pursuing certificate, postgraduate diploma or degree courses in IPR. In addition, professionals and corporate decision-makers should find the text valuable.

KEY FEATURES
• Discusses IPs such as Patents, Copyrights, Trademarks, Trade Secrets, Designs, Semiconductor Circuit Layouts and Geographical Indications, etc.
• Practices issues of IPRs in Cyber Space, Fashion Design, Biotechnology and Pharmaceutical industry.
• Classifies systems in practice for various IPs.
• Provides IPRs legal provision in Indian context.
• Includes a comprehensive glossary of important terms.


Principles of Management
MEENAKSHI GUPTA, Professor and Head, Department of Humanities and Social Sciences, Indian Institute of Technology Bombay.

Modern businesses are placed in a complex and intricate environment. The constraints imposed and the opportunities provided by the nature of the economic, political, legal, social, and demographic factors have a profound impact on the business. Management is a process by which managers continuously reinvent themselves to meet the organizational goals and global competition.

A good manager must also possess a sound understanding of human behaviour to develop the most important managerial skill of empathy.

This book is a first-level introduction to the field of management enabling students to understand what managers do, what skills are needed by managers, what their basic functions are, and in a nutshell what management is all about. The book elaborately describes the five functions of a manager—Planning, Organizing, Human Resource Management, Leading, and Directing and Control. The chapter-end exercises and practice quizzes encourage the student to rehearse the various concepts learnt throughout the text.

The book is useful for students pursuing courses in Business Management both at the undergraduate and postgraduate levels. It is also a useful text for undergraduate students pursuing courses in engineering disciplines and other professional courses where Principles of Management is part of the curriculum. A distinguishing feature of this text is that there is a visible bias of author’s training in Psychology.


Latest Print 2014 / 464 pp. / 16.0 x 24.1 cm ISBN-978-81-203-4883-7 / 450.00

PHI Learning: Publications
This book, now in its second edition, continues to provide a thorough treatment of the principles of management and administration. The contents of this book in this edition have been enhanced to serve the expanding needs of management students.

Divided into eleven parts, this book in Part I (Introduction) provides an overview of the key concepts of management. In Part II (Planning) and in Part III (Organising and Staffing), the emphasis has been laid on the traditional functions of management. Similarly, Part IV (Direction and Controlling) and Part V (Management in Future) of this book outline the key future thoughts. As the book advances to Part VI (Personnel Management) and Part VII (Financial Management), it explains the best practices and steps to their implementation its potential benefits and pitfalls. Part VIII (Production Management) deals with the organisational functions. Part IX (Marketing Management) and Part X (Management Information System) of this book discuss the role played by the information system in an organisation. Finally, in Part XI (Project Management), it describes the meaning, life cycles and the method of preparing a project in an organisation.

Designed for the students of B.Com (Pass and Hons.) and BBA courses, this book will also be valuable to all those who are studying for professional qualifications such as MBA, CA, ICWA and CS.

NEW TO THIS EDITION

- Includes three new parts—Part VIII (Production Management); Part X (Management Information System) and Part XI (Project Management)
- Contains two new chapters, Organisational Culture and Group Dynamics (Chapter 11) and Career Strategy and Career Development (Chapter 23).
- Incorporates new sections in several chapters to broaden the coverage.


Latest Print 2013 / 748 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-4581-2 / 525.00

This widely adopted text, now in its Fifth Edition, continues to provide in-depth coverage of the multi-dimensional aspects of international business. In this edition, much of the data and information is updated throughout the text.

Professor Francis Cherunilam, with his expertise and vast experience in the field of international business, gives a masterly presentation of the subject in its many splendoured forms. The text is enriched with references to Indian situations and examples though not diverting from the international perspective. Many Case Studies given in the book further enhance the value of the text which should be treasured by the students of management and practising managers and all those who have an abiding interest in international business.


Latest Print 2014 / 872 pp. / 17.8 x 23.5 cm
Diversity, inclusivity, and gender mainstreaming have today become the buzzwords in the corporate arena and civil society. The reason is increased business requirement for diverse competencies and skill sets. Hence, the need to have a mixed gender group has become a business imperative. Furthermore, there is heightened awareness that women are equally competent and talented, if not more, than men in various professional jobs. With increasing job opportunities, tapping and retaining this talent through initiation of various programmes within organizations has shown positive results. New Paradigms for Gender Inclusivity: Theory and Best Practices script some of the practices, in the form of case studies, which organizations have followed to enhance gender inclusiveness. These real-life case studies highlight the role played by organizations in facilitating the progression of women which indirectly has helped in their growth, development and recognition of being a forerunner in promoting diversity.

The book is divided into three parts. Parts I and III begin with a theoretician’s perspective on gender inclusiveness and gender mainstreaming in India, respectively and close with an academic detailing on reasons and causes for the same. Statistical data and models in the last chapter for the two parts validate the corporate, governmental and civil society attempts at introducing creative yet simple methodologies to make gender diversity and inclusion a reality in the workplace. In Part I, six case studies on the following companies: Broadridge, IBM Daksh, Infosys, Shell India, Jamshedpur Utilities and Services Company Ltd.: A Tata Enterprise, and Wipro have been presented which discuss the need for gender diversity and inclusiveness, drivers and barriers, and showcase measures adopted to overcome those barriers. Five cases: SEWA, Indian Police, Sakti, Indian Railways, and RUDI have been presented in Part III which highlight tasks accomplished by women in their area of expertise, marketing strategies adopted by the civil society to promote goods produced by women, sensitization workshops to address harassment, and training workshops. Part II (Interlude) is a break from organizational cases and shares some experiences, angst, insights and observations on gender diversity and inclusion through a narration, a poem and a reflective piece.

This book on case studies will be extremely useful for postgraduate students pursuing gender studies in Management Institutes, students working on gender related dissertation topics and corporate houses keen to learn from best practices of other organizations. Additionally, it would benefit readers who wish to learn about organizational policies and practices for gender inclusivity.

This well accepted book, now in its Sixth Edition, designed to use as a main text for courses such as International Business Strategies, Global Business Environment and International Business. The book is now comprehensive enough to cover the syllabus of all universities worldwide. It gives uptodate data and information on International Business. It also comprises a set of EXIM documents, Objective Type Questions and three Model Test Papers.

NEW TO THIS EDITION
• Ivey’s Best Selling Case, “Louis Vuitton in Japan” [ECCH Award Winning Case]
• Classic case—“Genting Malaysia: From East to the West”
• Video Exercise matching with the chapter content from author’s fan page—facebook.com/drjustinpaul
• Update data and more examples.

The text is highly useful for the students of Management, Commerce and Economics. It is also of great benefit to practicing managers in the field of International Business and to export-import professionals.

Dr. Justin Paul is an outstanding author, an excellent teacher and mentor. Amongst the entire excellent academic faculty at IIM Indore, he was one of the best and most liked. It was an honour and privilege to study under the guidance of such a guru.

—Dr. PRANAV MOHAN (IFC, World Bank)

I would like to take this opportunity to thank Dr. Justin Paul for writing the book on International Business, Sixth Edition, PHI Learning. I LOVE THIS BOOK. It is different from all other books I have ever read. The book gives all the relevant details of the effects of the policies and current changes in the international business environment.

—DR. DIVYA NEGI GHAI, Graphic Era University, Dehradun

It was a pleasure and unique experience to be taught by Professor Justin Paul at the University of Washington. I especially valued his international experience and insight, candor and professional depth. I also had the chance to interact with Professor Paul on a personal level and was particularly struck by his integrity and genuine interest.

—AVISHAI BARAL, USA, Financial Analyst, Amazon.com

It is with immense pleasure that I am writing to endorse for Dr. Justin Paul’s work. I have read his books and have also referred them several times. His books have emerged as the best selling title in Asia, particularly in South Asia. It is one of the best text available on the subject. The book covers all the aspects of International Marketing with a focus on IB environment, strategy and EXIM procedures.

—DR. MAHUA DUTTA, Professor, Fortune Institute of International Business, New Delhi


Latest Print 2013 / 800 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4863-9 / Rs. 525.00
Today, with the pervasive impact of globalization and liberalization sweeping across the globe, exerting its influence on both the developed and the developing nations, business is no more confined to the national borders of a country. More and more companies are spreading their business to markets abroad (for example, Tata Consultancy Services and Infosys Technologies spreading their business to USA and elsewhere) or acquiring new companies (for instance, Tata acquiring the Corus and the Land Rover and Jaguar, or reversely, Vodafone acquiring Hutch). International business, therefore, has become such an important area of study for students of management and commerce.

This comprehensive and easy-to-read text tries to lay bare the ramifications and complexities of international business. Divided into six sections, the book provides a harmonious blend of concepts and applications of international business. What distinguishes the text is the emphasis it lays on the blend of concepts and applications of international business. What distinguishes the text is the emphasis it lays on the blend of concepts and applications of international business. Primarily intended as a text for postgraduate students of Business Administration, MBA, MIB and postgraduate students of Commerce, the book would be of great value also to practising managers.


This concise and compact text explains, with great precision and clarity, the basic concepts, theories and practices of international business. Businesses today are no more confined to national boundaries and have become truly international. Any budding or practising manager, especially of big companies, needs to know the fundamentals of international finance. And this book, written by Professor S. Kevin, who has a rich and long experience in teaching international finance, eminently fulfils this need.

The book begins with an explanation of the exchange rate mechanism of foreign currencies, factors influencing exchange rate fluctuations, and the trading mechanism in foreign exchange markets. As currency forwards, futures, options and swaps are the instruments of currency derivatives used as hedging and speculative tools, the book goes on to give a detailed description of the use of currency derivatives for hedging as well as speculative functions. It concludes with an analysis of international financial institutions and their functioning, the participants and instruments of global financial markets where international funds are raised, the many uses of international funds in the form of portfolio investments, and direct investments in host countries.

The book is primarily intended as a text for postgraduate students of commerce and management, chartered accountancy (CA) and chartered financial analysis (CFA). It would also be of immense value to practising professionals in the field of international finance.


Latest Print 2013 / 296 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3791-6 / 250.00
This thoroughly revised and updated Sixth Edition is a result of the enthusiastic reception accorded by the readers to the earlier editions and the wide adoption of the book in academic institutions.

While retaining the major contents of the earlier editions, the new edition provides a clear understanding of the latest tools and techniques used in international finance. The book deals with contemporary financial environment and strategies, and the functional as well as operational aspects in the international financial arena.

**What is New to the Sixth Edition:**
- All chapters updated to give the latest information.
- New Case Studies and Study Topics added.

The book is primarily intended as a textbook for post-graduate students of Business Management (MBA), Master of International Business (MIB), Master of Commerce, Master of Economics, and Master of Financial Control (MFC). Besides, students of Chartered Accountancy and professionals in the financial field should find the book very valuable.


**KEY FEATURES**
- Discusses the upcoming concepts like Environmental Energy Effects (3Es) and its variations; Positive Environmental Energy Effects and Negative Environmental Energy Effects (P3Es and N3Es) and their effects on organisational culture.
- Explains Therapy for Quality of Life (TQL) a well-researched concept for enhancing the concern for employees and their families.
- Dwells on Managing by Influence a wholesome method of motivating and leading employees for raising their performance standard and contribution to their organisation.
- Every chapter is incorporated with Real-life cases to provide an analytical insight to the concepts.

BUSINESS AND MANAGEMENT

Knowledge Management

H.C. MRUTHYUNJAYA,
Consultant (Corporate Systems)
serving various organizations.
Elected as a Life Member of
Indian Academy of Wood Science.

For ensuring sustainable success in a competitive global market scenario, business enterprises are seeking for their own latent knowledge treasures. This book explicitly explains how stringent strategies and practices emphasized under knowledge management can help streamline organization and its resources.

Divided into ten chapters the book elaborates on the concepts, theories and principles governing knowledge management. Beginning with history and evolution of knowledge, and its growth and impact on the society, it further explains the role of knowledge management towards Corporate Social Responsibility (CSR). The chapters on Managing Competitiveness and Managing Knowledge Force discuss how innovative business strategies can help to achieve new landmarks, and how the employees of an organization can turn into a knowledge force and achieve success by churning out profit.

The concluding chapters highlight two important aspects of knowledge management, certainty management and uncertainty control. The chapters discuss how an organization can flourish by predicting and controlling the uncertainties and managing the obvious situations.

The highlight of this book is the inclusion of well-analyzed live cases. All the cases demonstrate how seemingly impossible tasks can be successfully handled with an efficient handling of knowledge management principles and practices.

Primarily intended for the students of management, this book can also prove beneficial to the practising managers.

KEY FEATURES

• Presents a global picture of knowledge management in practice in live shop-floors
• Incorporates around 550 classified audit probe questions embracing various areas of knowledge management
• Illustrates the concepts, principles and practices of knowledge management with well-labelled figures, tables and boxes


Leadership

SANJAY SAXENA, Reader in the Department of Management,
School of Management Sciences,
Varanasi.

PURNIMA AWASTHI,
Lecturer in the Department of Psychology, Faculty of Social Science, Banaras Hindu University, Varanasi.

In this competitive environment fraught with ever-changing situations, a manager with high quality leadership is in great demand. A modern leader-manager needs to be creative, inspiring and motivating, as well as must have good interpersonal skills. This book imparts the knowledge of various theories and styles of leadership to students, entrepreneurs and business executives to enable them to meet both management and leadership challenges more effectively.

The text presents modern concepts and different perspectives of leadership. It acquaints the readers with minuscule differences between leaders and non-leaders and approaches of managers and leaders. Written in a lively style, the book teaches how to become an integrated human being in order to utilize leadership concepts at the work place and achieve success, and emphasizes the development of interpersonal skills to build productive relationship with people. Finally, it discusses the functions of leadership and different courses of action that a leader has to take in real-life situations.

The management and managerial leadership theories of eminent management thinkers, taught in the business schools, are thought-provoking, though relevant only to the era and the environment of their research and development. The effectiveness of these theories needs a relook on their universal application in the globalised environment of the current era. This book is a sincere effort to bring along all the managerial leadership concepts, and discuss them vis-à-vis current organisational set-up.

The book is divided into nine chapters, and begins by discussing the topics like International Dependency and Global Integration consisting of world institutions, regional groupings—Unions, Associations, Agreements, and their objectives. The chapters further conceptualise and recommend significant aspects of institutionalised positive managerial leadership in organisations.

The book further dwells on the important milestones to attain managerial leadership like influence of culture on employee behaviour, positive organisational culture, profile of positive managerial leadership, their changing motivational roles, organisational assimilations of multicultural employees, new approach to employee welfare, therapy for quality of life of employees, and some suggestions to evolve a future-ready achievable dream organisation.

This book is intended for the postgraduate students of management and also for the practising managers.

KEY FEATURES
• Discusses the upcoming concepts like Environmental Energy Effects (3Es) and its variations; Positive Environmental Energy Effects and Negative Environmental Energy Effects (P3Es and N3Es) and their effects on organisational culture.
• Explains Therapy for Quality of Life (TQL) a well-researched concept for enhancing the concern for employees and their families.
• Dwells on Managing by Influence a wholesome method of motivating and leading employees for raising their performance standard and contribution to their organisation.
• Every chapter is incorporated with Real-life cases to provide an analytical insight to the concepts.


This comprehensive text, now in its Second Edition, continues to provide the entire spectrum of e-governance—from definition of e-governance to its history, evaluation, e-governance models, infrastructure and manpower facilities, data warehousing possibilities in implementation of e-government projects, and strategies of success of such projects.

The text covers 22 case studies—18 Indian case studies and four International case studies. The Indian case studies include Bloomi, a project of Karnataka Government, CARD (Computer-aided Administration of Registration Department), Smart Nagarpalika (Computerization of Urban Local Bodies or Municipalities), IT in judiciary, Sachivalaya Vahini (e-governance at Secretariat), e-Khazana (Computerization of Treasury Department), and e-Panchayat (Electronic Knowledge-based Panchayat). The international case studies are culled from USA, China, Brazil and Sri Lanka.

This book would be of great interest to students of computer science, IT courses, management and public administration. In addition, government departments—both at the centre and in various states—and administrators should find the book highly useful.

NEW TO THIS EDITION
• Provides two Appendices—one on Eucalyptus cloud to remotely provision e-governance application and another on Revisiting NeGP: eBharath 2020: the proposed future NeGP.

Project Management: A Life Cycle Approach

ARUN KANDA, formerly Professor of Industrial Engineering, Mechanical Engineering Department, IIT Delhi.

Project management is a judiciously planned and organized effort to accomplish a specific project within a time frame. This book is designed for undergraduate and postgraduate students of mechanical engineering, industrial engineering, production engineering, management studies as well as working professionals who wish to have an insight into the entire life cycle decisions related to a project.

This book on project management looks at the decisions to be made during the various phases of the project process, examines systematic methodologies and models that help in the decision making, and provides interpretation of results obtained from various models so that they may be intelligently adopted by a practical project manager in the successful implementation of any project. This book offers something for each of the following categories of readers:

For the student: It provides a treatment of the fundamentals of project management, stressing the underlying theory and assumptions for the various decisions to be made in the entire life cycle. There are examples and practice problems to illustrate the concepts.

For the practical project manager: It is a systematic collection of major decisions and solution methodologies available for tackling the problems of project management. The role of human and behavioural factors in managing teams and conflict resolution is emphasized along with technical expertise.

For the researcher: Throughout the text where results are derived, the reference to original sources is included so that the serious reader may pursue those ideas in greater depth. Also hints on the state of the art and directions for research are included wherever appropriate.


Latest Print 2013 / 240 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4173-9 / 225.00

Project Management, 2nd ed.

RAJEEV M. GUPTA a Project Consultant, is a Visiting Faculty at various B-Schools- SGSITS, IMS, PIMR, and Jaipuria institute. Mr. Gupta has also worked as full time faculty at SGSITS, Indore.

The Second Edition of this comprehensive book, discusses the fundamental aspects of Project Management in a student-friendly manner. It deals with topics such as project life cycle, project selection, feasibility study and techniques like PERT and CPM for project control. Various methods such as Hiller model, sensitivity analysis and simulations are described with hypothetical numerical examples to evaluate risk.

A new chapter on International Aspects of Project Management is added to provide the knowledge of project management at international level. Several new case studies have also been added to provide better learning of the various concepts of the subject. Besides these, most of the chapters have been updated with new figures and more practical problems.

Primarily designed for the undergraduate and postgraduate students of management and engineering (industrial and civil engineering), the book will be equally useful to the practicing professionals of project management.

KEY FEATURES OF THE BOOK
• Includes algorithms for crashing and resource leveling.
• Provides a new method for determining marketing feasibility.
• Describes quantitative methodology for evaluating risk.


Latest Print 2014 / 368 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4940-7 / 325.00
This innovative introduction to business policy and strategic management, covering both the illustrative cases and conceptual foundation, offers authoritative approaches to strategic leadership in emerging markets. Among its many unique features, this comprehensively updated and revised second edition is structured to help students think strategically.

The text is well supported by more than one thousand sources of international research, India-focused case studies and experiential assignments. This comprehensive text on theory and practice of strategic management is a must read for management students as well as business practitioners and consultants.


Latest Print 2014 / 600 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-3244-7 / ₹ 395.00

SANJIVA SHANKAR DUBEY is an expert on IT strategy and Innovation. He has spent over 25 years in IT while working with IBM and Tata Steel.

This textbook, now in its second edition, continues to provide a thorough understanding of the concepts and applications of IT strategy and management. The book gives an in-depth study of the information technology as a strategic resource, the need for a strategic approach for its management, and the necessity of its alignment with business strategy. It explains how to prepare an effective plan for the implementation of information strategy. The book also describes how to evaluate the impact of IT on organizations and their workforce, and how to measure returns on IT investment. It also covers recent developments in IT management such as ITIL (Information Technology Infrastructure Library), IT service management, MOF (Microsoft Operations Framework), COBIT, and standards such as ISO 20000 and BS27001, which are currently being practised by the industry but need more dissemination in the academic arena.

This well-structured and clearly written book is designed for the students of MBA, MCA, BE (IT) and other graduate courses. In addition, IT Professionals who need to update their knowledge continuously for their professional growth will also find the book quite handy.

The book has received wide patronage as textbook and reference book by several leading MBA schools and technical universities for courses such as Information Management, MIS, IT/ITES Management, ITSM, and Computers in Management or IT for the Management of Enterprise.


Latest Print 2011 / 280 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-4221-7 / ₹ 250.00
This book allows students to learn the essentials of theory and practice of Strategic Information Technology (IT) Management through serialization of key points. The book is structured into three units and ten appendices. Unit I on Strategic Role of IT explains the need for IT management and discusses its role in business and decision making. Besides, different types of IT and business models are explained. Unit II on Planning for IT Support discusses the various IT management processes, IT service management, management of information resources, strategic planning for IT and IT investments. Unit III on Ensuring IT Support focuses on implementation of security aspects, organization structure of IT and management of information systems. In addition, the appendices complement the three units with a view to equipping the readers with the basics of information technology, information systems, strategy and planning, engineering economy, risk management, and configuration management.

The book is well suited for the students of BE/BTech/ME/MTech (Computer Science), BSc/MSc (Computer Science), BSc/MSc (IT), BCA/MCA, and BBA/MBA. It is an ideal text for professionals who are interested to grasp the core concepts of Information Technology Management without attending a formal instructional course. Besides, it will be suitable for conducting short-term training programmes for managers.


SHUBHRA VERMA, Management Consultant in the area of human resource and strategic management.

Keeping in view the requirement of various management schools and professionals, this book presents dynamically changing policies, strategies, business models, frameworks and practices of corporate enterprises in India and abroad in an interesting and stimulating manner. The concepts are structured around the decision making process with suitable examples to enlighten students and managers with practices and techniques of making business strategies in today’s competitive environment. The book includes 13 real-life Indian cases to provide an invaluable opportunity to the readers to apply their theoretical knowledge in solving business problems by analysing strategic issues of specific organizations. Besides management studies, the text will also prove useful to the students of commerce and allied areas.

KEY 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.

The revised and updated Fifth Edition gives an in-depth and incisive analysis of the basic principles of strategic management. The exposition of these principles is reinforced by seven case studies that encompass the broad spectrum of Indian companies. These case studies are culled mainly from manufacturing and information technology, and include both private and public sector units. The case studies will be of immense help to the budding managers as well as provide them with the requisite practical orientation for understanding the strategic management issues.

The inclusion of the concepts, theory and case studies in a single, compact volume is the main feature of the book, which makes the subject easier to understand and learn.

Intended primarily as a textbook for postgraduate students of management and commerce, this book is of immense help to all those attending management development and executive development programmes.

**NEW TO THIS EDITION**

- A brief section on ‘Government Initiatives’ is added in Chapter 4.
- Section on ‘CSR activities mandated by the Government of India’, have been incorporated in Chapter 5.
- A new case study on Indian Airlines has been introduced.
- All case studies of the previous edition have been updated with latest company information and development.


**Indian Cuisine, The**

**KRISHNA GOPAL DUBEY,** Associate Professor and HOD (Food Production), Amrapali Institute of Hotel Management, Nainital.

Variety is the spice of life, and knowing to prepare the different cuisines of the states, enhances the taste buds. This book contains many mouthwatering Indian dishes, their detailed recipes and their predominant role in Indian culture. The simple language and guidelines provide excellent introduction to theory and practices of the regional cooking procedures in Indian states.

The book serves a platter of history of spices, their origin, the religious and medicinal impact of these spices, different cooking utensils and their usage, various methods of cooking and many finger-licking recipes. The text discusses the traditional and special delights of the four broad regions—East, West, North and South. The staple food and their occasion-oriented backdrop dominate all the descriptions. The recipes are simple, tested and standardized so that they can be easily adaptable by the students and professionals of college and food service organizations.

Intended for undergraduate and postgraduate students of hotel management, this textbook will also be useful for the hoteliers and budding professional chefs as it caters to the syllabi prescribed in many universities.

**KEY FEATURES**

The book covers:

- Staple diet of the people of different religions, cultures and customs
- Varied usage of spices and composite masalas
- Different types of gravies used
- Innumerable dishes and their preparations
- Various domestic tips for kitchen management
- Guidelines on keeping the kitchen fresh and free of odours
- Complete Indian cuisine integrated in one compendium

HOSPITAL ADMINISTRATION AND MANAGEMENT

Human Resource Development (Human Resource Management)

Hospital Administration and Human Resource Management, 6th ed.

D.K. SHARMA, Medical Superintendent of All India Institute of Medical Sciences (AIIMS), New Delhi.

R.C. GOYAL served with distinction as Head, Personnel Department, Holy Family Hospital, New Delhi, and is now associated with the hospital in ISO9001: 2000, NABH (National Accreditation Board for Hospitals and Health Care), training, legal matters and in general and medical administration.

As in the previous editions, this substantially revised and updated edition continues to discuss in detail the various methods of organizing a hospital’s Human Resource Department. It also shows how the use of scientific techniques can improve the services of the hospital and ultimately benefit the patients as well as the hospital itself. The Fifth Edition brings in new concepts and new ideas and takes into account the contemporary challenges of hospitals in the human resource management area.

Intended primarily as a text for students pursuing Master of Hospital Administration (MHA), postgraduate diploma courses in Hospital Administration or Health Care Services, and undergraduate and postgraduate courses in nursing (B.Sc./M.Sc. Nursing), the book would be equally useful for all those engaged in hospital administration, nursing administration, and human resource management.


Latest Print 2013 / 616 pp. / 17.8 × 23.5 cm

PHI Learning: Publications

Human Resource Management in Practice with 300 Models, Techniques and Tools

SRINIVAS R. KANDULA, Executive Vice President and Global Head-HR, iGATE Corporation, Bangalore.

This compact, easy-to-read book presents the basic principles, practices, and advancements made in human resource management. It shows the enduring values of those principles, as well as the significance of the models, techniques and tools evolved—which may rightly be called classics as these have been propounded by HRM proponents, time tested, and proved permanent.

The book covers three major subjects of management—Human Resource Management (HRM)/Human Resource Development (HRD), Organizational Behaviour (OB), and Organizational Development (OD)—under 18 different themes.

What distinguishes the text is that it uses 300 well established models, techniques, and tools, practised, in the field of HRM. The practical implications of these techniques are also discussed, enabling the reader to comprehend the concepts with ease. The book would be useful to postgraduate students of management, all those specializing in human resource management, and the professionals.


Latest Print 2014 / 396 pp. / 17.8 × 23.5 cm
The book in its fourth edition continues to educate the students on the HRM concepts—fusing the traditional theories with the modern approach. The new edition has been thoroughly revised and updated keeping in view the advancements made in the field of Human Resource Management. Besides updating the evidence base and providing functional examples in each chapter, several sections/concepts have been added to this edition. These include:

- HR’s professional competencies
- HR transformation: New HR organization
- New Gen HR
- Talent management
- Recent trends in performance management
- Additional models of motivation
- New models of reward systems
- Human resource productivity model
- Knowledge management architecture
- New models of learning organizations
- Impact of strategic HRM on practice

The book comprehensively deals with all the facets of HR with the help of adequate Indian models, cases and examples based on the theoretical framework of the west, thereby, bringing east and the west on the same platform.

The book is intended for the postgraduate students of management. Besides, it is equally useful for the practising managers.


Latest Print 2014 / 736 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4962-9 / 525.00

BUSINESS AND MANAGEMENT

Human Resource Development

HUMAN RESOURCE MANAGEMENT

Biswaajeet Pattanayak,
Director of Asian School of Business Management, Bhubaneswar.

Strategic Human Resource Development

Srinivas R. Kandula, Executive Vice President and Global Head-HR, iGATE Corporation, Bangalore.

This well-organised and compact text gives a thorough analysis of the significance of the HRD system in planning and implementation of strategic responses by focussing on the alignment between strategic responses of organisations and human resource development. The entire theme is presented with the help of exhaustive literature review and is based on empirical study conducted in several organisations. The book is unique as it provides overview of 26 strategic responses and the role of HRD in them.

The book is profusely illustrated and contains 140 tables, and a fairly large number of figures and boxes, which will enable the readers to grasp the subject with ease. The comprehensive References will be of great help in delving deeper into the topics discussed.

Though designed primarily as a textbook for postgraduate students of management and postgraduate diploma students in Business/Human Resource Management, this indepth and fascinating study on strategic human resource development will be highly useful to consultants and practitioners in HRD and all those involved in strategic management/corporate planning.


BUSINESS AND MANAGEMENT

Human Resource Development
(HUMAN RESOURCE MANAGEMENT)

Strategic Human Resource Development:
Concepts and Practices

KESHO PRASAD, Management consultant, specialized in the areas of human resource and general management.

In today’s corporate world, employee management is first and foremost concern of any organization. An organization can easily churn out the best out of their employees by improvising the strategic development within the human resource norms. This book comprehensively discusses the strategic management functions that are designed to meet the business objectives effectively.

This textbook explains the concepts of human resource management (HRM) and human resource development (HRD), and shows how they supplement and complement each other. The book explicates how sourcing, retention, development, compensation and performance are driven by the strategic business needs in an organization.

Divided into four parts, the book explicates strategic developmental aspects of the people (training and development) vis-à-vis organizational behaviour, culture and leadership as well as primacy of technology in training as well as the concepts of human resource management and human resource development. The special feature of this book is a chapter on Competency Mapping, which is a tool to identify accurate skills for developing competency requirement within the employees.

This book is intended for the postgraduate students of Human Resource Development (MHRD). However, it will be equally useful for the students of Human Resource Management as well as the practising managers.

KEY FEATURES
• Interspersed with the cases from various national and international organizations
• Presents key concepts for practical application of HRM techniques in actual business organizations
• Review questions to check students’ comprehension of the subject


 Latest Print 2012 / 424 pp. / 17.8 x 23.5 cm

PHI Learning: Publications

Human Resource Development
(PERFORMANCE MANAGEMENT)

Performance Management:
Strategies, Interventions, Drivers

SRINIVAS R. KANDULA, Executive Vice President and Global Head-HR, iGATE Corporation, Bangalore.

This comprehensive book, written from practitioner’s point of view, presents the theory and practices of performance management in a systematic manner. The book is patterned after motivational structure of human resource comprising seven strategies—Reward, Career, Team, Culture, Measurement, Competency and Leadership centric performance management, 14 interventions, and 140 drivers. It discusses in detail important topics such as the 360 degree feedback, the balanced scorecard, six sigma, implementing performance management model/appraisal system, which are essentials of successful performance management.

KEY FEATURES
• Presents in detail the theory of reward, culture, career, competency, measurement and leadership in the context of integrated performance management model (IPMM).• Discussion questions, case studies and key words are added in each chapter for better comprehension.

This concise book is primarily intended as a textbook for postgraduate students of management—with specialization in human resource management, including organization development, industrial relations and training and development. This is also highly useful for professionals in the field as a handbook for driving performance management step-by-step.


 Latest Print 2014 / 328 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-2988-1 / 295.00
E.H. McGrath, S.J., former Director and Professor at XLRI, Jamshedpur, is a trainer and consultant in the field of human development and industrial relations. He has been chosen several times as sole arbitrator in industrial disputes.

This reader-friendly book on personality and self-development, now in its Fourth Revised Edition, is intended to steer the reader to a better life through leadership in the world of work and industry. It is extremely useful for technical apprentices, trainees, and their instructors, supervisors, and trade unionists—in short, for any person associated with worker groups.

Fr. McGrath, a name to reckon with in the area of HR, shows, in this compact book, the importance of training for life and leadership.

**WHAT'S NEW TO THIS REVISED EDITION**

- Necessary updating done throughout the text.
- The references to pay scales and labour laws have been adjusted along with minor modifications in a number of places.

The text is written in a simple conversational style using clear examples and cartoons to make it lively.


Latest Print 2013 / 328 pp. / 13.9 × 21.6 cm

SRINIVAS R. KANDULA, Executive Vice President and Global Head-HR, iGATE Corporation, Bangalore.

Competency-based HRM is a methodology adopted by various organizations to assess the current capacity of their resources based on competencies against the capacity needed to achieve the vision, mission and business goals of the organization. This book comprehensively dwells on all the aspects of competency-based Human Resource Management, and its relevance in various industry verticals.

The book has been organized into five chapters—each focusing on the tools and techniques to judge core competencies. Beginning with the fundamental theories and definitions of competency, the book goes on explaining the mapping methods like Repertory Grid, DACUM, competency card sort activity and so on.

The book further presents the analytical tools that help to build competency models which further help in establishing reliability. Benchmarking competency models and assessment tools are also dealt with in detail. The concluding chapter elaborates competency applications to Human Resource Management in the functional areas of recruitment training and development. The book is interspersed with the Case Studies to add practical insight to the subject.

The book serves both as a textbook for management students and as a reference book for working HR professionals.


Latest Print 2013 / 328 pp. / 13.9 × 21.6 cm
The classic view on conflict has always been that conflict in any form is harmful and should be avoided at all cost. However, modern scholars and the corporate world at large are fast realizing that conflict is not as lethal as considered to be and if maintained within certain parameters, it can actually boost a company’s growth.

This text tells exactly how and when a conflict can be translated into a successful process and when it should be checked before it spells trouble for the company. The book covers cases from all the essential areas of conflict and analytically discusses every aspect while striking a clear balance between theory, concept and application. This book is an attempt to expose readers to varied perspectives, to challenge their individual positions and ideologies, and to inspire, inform and train them in the field.

The volume is designed for the postgraduate students of management as well as those pursuing similar professional courses. Besides, professionals and anyone keen on learning the various aspects of conflict and its management will find this book immensely useful.

**KEY FEATURES**

- Cartoons and illustrations throughout the text to make it an interesting read
- Focus on both skill development and practical usage
- Chapter summary and review questions at the end of each chapter for better conceptual understanding


Latest Print 2014 / 292 pp. / 16.0 × 24.1 cm

**Practical Guide to Human Resource Information Systems**

SATISH M. BADGI currently works for a global Management and IT consulting company where he continues to play a global role in HRIT domain.

*Practical Guide to Human Resource Information Systems (HRIS)* is a comprehensive presentation on global HRIS implementations and the associated challenges faced in such global projects. It begins with the basic HR and IT concepts and guides the readers through the complete life cycle of HRIS applications, spanning from planning to execution. Both HR and IT play an equal role in the development of HRIS applications. This book will help students from both HR and IT streams in assimilating the intricacies of implementation of HRIS projects.

HR is one of the most popular ERP product implementation topics in today’s business world. Its implementation needs a practical discussion using examples from real world. The examples, the case study and discussions in the book follow an international approach rather than discussing only a single country HRIS implementations. A real-life case study that flows through various chapters of the book brings out challenges in the implementation of HR specific projects.

In today’s global economy, HR is changing fast and dives into areas such as strategy outsourcing, mergers and acquisitions (M&A). This book covers all these areas and other topics that are relevant to today’s HR world, providing more value to the readers. It provides illustrations to assist readers in visualizing the topics discussed and in developing a sound understanding of the integration and data aspects of HRIS systems.

This book will be useful as a text for a course in HRIS wherever prescribed for the MBA (HR) and MBA (IT) students. The book encourages self-directed study and thought process, based on references provided at the end of each chapter, and hence will also be useful to consultants, HR professionals, and IT professionals working with HR departments.


Latest Print 2012 / 260 pp. / 16.0 × 24.1 cm
Deewakar Goel, Visiting Faculty with IIT Delhi; XLRI, Jamshedpur; IISWBM, Kolkata; Anna University, Chennai; Madras University; and Narsee Monjee Institute of Management Studies, Mumbai. He has wide experience of teaching management students in various institutes. He is currently Human Performance Technologist, International Air Transport Association (IATA), Geneva, Switzerland and a Human Resource Consultant of International Civil Aviation Organization (ICAO), Montreal, Canada.

This well-written volume, now in its Second Edition, continues to offer, in a clear and easy-to-read style, a comprehensive coverage of the various aspects of performance appraisal and compensation management. Written by a practicing manager who has also lectured extensively in premier management institutes, the text focuses on real core issues which are the tools for appraising the performance of an individual.

In this edition, seven new chapters on key performance areas, the bell curve approach, competency mapping, new trends in training and development, recession, correlating compensation with performance and writs are included to cover the latest developments in the field.

This book is intended as a text both for students of management and commerce. It will also serve as a useful tool for managers, executives and HR practitioners who are confronted with many performance management issues in their work scenario.


Sangeeta Sharma, Assistant Professor in the Languages Group at Birla Institute of Technology and Science (BITS), Pilani (Rajasthan).

Raghuvir Singh, formerly, Executive Secretary and Programme Director at Indian Society for Technical Education (ISTE), New Delhi.

This book covers the concepts related to advertising, media planning and creativity in advertising. It also covers the changing face of the advertising world, web advertising and the concept of Integrated Marketing Communications (IMC). It describes in detail how to develop and execute an effective advertising campaign by understanding consumers’ mind and conducting advertising and media research. It enables the reader to assess, review and modify an advertising campaign or a media plan.

Key Features
- A large number of ads, current as well as from the past, are used to elucidate the concepts.
- The text helps the reader analyze an ad copy and find its relevance to the product.
- Case studies on popular brands are provided throughout the text to assist the reader in understanding the key elements of successful brand building.

The book is primarily intended to serve as a text for postgraduate students of management and the students pursuing various courses in advertising.


Latest Print 2013 / 496 pp. / 17.8 x 23.5 cm ISBN-978-81-203-2973-7 / ₹ 350.00

PHI Learning: Publications
BUSINESS AND MANAGEMENT

Managing Innovations and New Product Development: Concepts and Cases

MUKESH CHATURVEDI, ECE Chair Professor, Birla Institute of Management Technology (BIM-Tech.), Greater Noida (U.P.).
ASEEM KUMAR, Assistant Director, Centre for Management Development, All India Management Association.
MANMOHAN RAHUL, Associate Professor, School of Management, Ansal Institute of Technology, Gurgaon (Haryana).

This comprehensive book explains how an innovative idea or a concept, if executed properly, can create the best product in the market.

The book presents a framework for a new product development, laying emphasis on generic concepts and processes, which are useful and profitable for small and large organizations including the multinationals. The book highlights the innovation theories that are helping service sector companies to prosper and excel in their fields. It also provides a mathematical formula for students to calculate sales-estimation of first-time-sales of a new product. The Ten Case Studies on real-life products from the Indian market enrich the text and enable students to fully understand innovative techniques that help increase the potential and market value of an established product.

KEY FEATURES
• Gives a number of examples to illustrate the concepts discussed in the text.
• Incorporates several illustrative figures, tables, and boxes to make the learning process more accessible.
• Provides well-graded chapter-end exercises to test students’ comprehension of the subject.

Primarily designed as a textbook for the postgraduate students of management, this book will also be useful to the management professionals as a reference.


Latest Print 2009 / 312 pp. / 16.0 × 24.1 cm

Product Management: Text and Cases

KAUSHIK MUKERJEE, Associate Dean, ICFAI Business School (IBS), Pune.

This comprehensive book focuses on the critical issues of product management that enable better product performance in the marketplace. It deals with many new products that straddle across Indian and global markets to give a broad and clear perspective of the current competitive marketing scenario. The text covers such topics as competitive product development and product life cycle strategies, innovation, branding, pricing, segmentation, targeting, positioning, CRM, modern product management tools, and various other issues.

KEY FEATURES
• Provides a clear understanding of managing the product category, and product life cycle.
• Focuses on the present Indian marketing scenario.
• Illustrations and websites are provided to acquaint the readers with the latest product information.
• Gives 20 Case Studies that cover all the critical aspects of product management.
• Provides Assignments at the end of each chapter to lend a practical touch to the subject.

Intended primarily as a text for the postgraduate students of Management, the book will also prove to be a useful learning tool for the students of Marketing and Commerce. Besides, the strategies discussed in the book can be good takeaways for practising managers, and for those interested in learning about Product Management.


Latest Print 2009 / 212 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3725-1 / 175.00

PHI Learning: Publications
This completely revised and updated text, now in its Third Edition, continues to explain the underlying concepts of product management. In the process, the book equips the budding as well as the practising managers with sufficient knowledge about how to deal with different problems faced in managing any typical fast moving consumer good or durable product.

Divided into three parts, the book provides, in Part I, a macro perspective of the Indian market. Part II offers an analytical discussion interspersed with vivid illustrations on conceptual issues like branding, segmentation, positioning and differentiation. Part III features several new products; it also provides latest information on the products presented in the earlier edition. In addition, it analyzes the current market situation prevailing for a particular product in India. Finally, here, each chapter shows how leading companies are successfully marketing the particular product in the Indian market.

This well-established study has been widely adopted as a textbook in MBA programmes across the country. The Third Edition, continues to elucidate the concepts and topics of Product Policy and Brand Management in concise and clear manner.

The book is divided into four parts—Part I on Fundamentals of Product Management throws light on the concepts of product and its management, role of product managers, product life cycle, diffusion models, developing a product manager, and the product planning system and strategies. Part II on New Product Development shows what are the barriers faced while developing a new product, the test marketing stages and its alternatives, launching of the product, future trends of product management and success stories. Part III on Brand Management defines branding, branding decisions, brand equity, brand identity, and brand positioning. Part IV gives an analytical and practical insight on the discussed concepts with the help of Live Case Studies.

The book is primarily intended for the students of MBA, MMS, and ME/MTech (industrial Management). Besides, it would also be useful for the professional managers as well.

NEW TO THIS EDITION

The new edition is incorporated with 11 new cases on:

• Tracking of a Product Launch
• Long-run Market Share Estimation
• Conversion of a Commodity to a Brand
• New Product Development Approach to a Food Product
• Portfolio Matrix Application

BUSINESS AND MANAGEMENT

Marketing (Consumer Behaviour)

Consumer Behaviour: Insights from Indian Market
(with CD-ROM)

Ramanuj Majumdar,
Professor of Marketing at Indian Institute of Management Calcutta.

In this compact, concise and profusely illustrated text, Professor Majumdar, with his rich and varied experience in Marketing, tries to provide interesting insights into many of the interesting aspects about consumer behaviour. He gives a masterly analysis of the theory and practice of consumer behaviour and decision making and the factors that influence it.

Divided into six parts, Part I of the text shows the importance of understanding consumer behaviour; Part II highlights different aspects of consumer psychology and covers such topics as consumer motivation, consumer perception, and consumer personality. Part III demonstrates how consumers behave in their social and cultural settings, the effect of personal factors, and the influence of reference groups on consumer behaviour. Part IV dealing with consumer decision making describes the various stages involved in brand choice, the post-purchase behaviour and, importantly, the six well-established models proposed by scholars on consumer behaviour. Part V analyzes the diversity of the Indian market and about the emerging patterns of consumer behaviour.

The concluding part—Part VI—gives seven live case studies that dwell on brand building and showcases some successful brands marketed in India.

For the wide spectrum of readers—the students of management, the marketers and the practicing managers—reading this book should be a very valuable and rewarding experience. They would treasure the book for its incisive insights on the Indian market and the wealth of illustrative examples and concepts it offers.


Neuromarketing: A Peep into Customers’ Minds

J.K. Sharma, Head—CRM, Jagsonpal Pharmaceuticals Limited, Delhi.

Deepali Singh, Associate Professor, ABV Indian Institute of Information Technology and Management (ABV–IIITM), Gwalior.

K.K. Deepak, Professor in Department of Physiology, All India Institute of Medical Sciences (AIIMS), New Delhi.

D.P. Agarwal, Chairman, Union Public Service Commission, Delhi.

What consumers think is not necessarily what they do. Unearthing this ambiguity between the thinking mind and the doing mind of a consumer is one of the greatest challenges faced by the marketers today. Therefore, the researchers, in the field, have devised a new concept called neuro-marketing, which maps the cognitive behaviour (the way one thinks and reacts) of a consumer.

This comprehensive book highlights various aspects of neuromarketing, its application to study consumer behaviour, and its techniques to strengthen brand management and advertising strategies.

The book has been organized into four different sections. Section I details on essentials of marketing and brand management. Section II digs on to the rationale of neuromarketing, explaining the structure and the function of the human brain. The correlation between autonomic nervous system and brand communication is also explained in detail in the text. Students are also introduced to the concepts of brain laterality and to the various research methods used to conduct neuromarketing such as functional Magnetic Resonance Imaging (fMRI), Magnetic Resonance Imaging (MRI) and coloured scanning. Section III digs on to the emerging areas of neuro-marketing with the help of some important research papers. Section IV discusses concepts of neuromarketing in an integrated approach. The section also presents some application areas with special reference to communication strategy, design and product life-cycle.

Intended for the postgraduate students of business management and international marketing, this book would also be beneficial for the brand managers and advertising professionals as a reference handbook.

Busines and Management

Customer Relationship Management: A Strategic Approach to Marketing

Kaushik Mukerjee, Faculty Member, ICFAI Business School Pune.

This straightforward and easy-to-read text provides students of management and business studies with a thorough understanding of fundamental abilities and strategies that lead to the successful implementation of practice of CRM (Customer Relationship Management), regarded as the wonder solution to all the problems encountered by marketers.

To cope with the increasing intensity of competition, necessitating a drive towards enhancement of customer satisfaction, the book emphasizes the need for integration and coordination along the value chain to effectively and efficiently manage customers. The book focuses on best practices in CRM and illustrates along the way through several case studies how CRM has been used in various industries to build relationships with customers.

The book also provides a solid grounding in tools, techniques and technologies used in CRM and explains in detail the power of eCRM to help companies make their vision of CRM a reality.

The text is intended for students of MBA, PGDM (Postgraduate Diploma in Management), and PGPBA (Postgraduate Programme in Business Administration).

Primarily intended as a textbook for the students of Management, the book would prove to be an invaluable asset for professionals in service industries.

Key Features
• Provides insight into contemporary developments in CRM
• Cites Indian as well as global examples
• Offers case studies on Indian and global companies to highlight the use of CRM

Contents:

Latest Print 2014 / 192 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-3285-0 / $225.00

Customer Relationship Management: Concepts and Cases, 2nd Edition

Alok Kumar Rai, Associate Professor in Faculty of Management Studies, Banaras Hindu University, Varanasi.

This thoroughly revised and enlarged edition brings to light the latest developments taking place in the area of Customer Relationship Management (CRM), and focuses on current CRM practices of various service industries.

This edition is organised into five parts containing 19 chapters. Part I focuses on making the readers aware of the conceptual and literary developments, and also on the strategic implementation of the concepts. Part II discusses the research aspects of CRM. Part III deals with the applications of information technologies in CRM. Part IV provides the various newer and emerging concepts in CRM. Finally, Part V analyses the CRM applications in various sectors, industries and companies.

Primarily intended as a textbook for the students of Management, the book would prove to be an invaluable asset for professionals in service industries.

Contents:

Latest Print 2014 / 528 pp. / 17.8 x 23.5 cm
MILIND T. PHADTARE, Senior Professor and Dean of the School of General Management at National Institute of Construction Management and Research (NICMAR), Pune.

The book would serve as a standard textbook on the subject of Industrial Marketing, and thus, will be useful for students of management. This book is aimed at providing better conceptual understanding of the industrial marketing, as well as, enhancing the skills required in its practice.

The book begins with the review of fundamentals of marketing, concepts in industrial marketing, industrial marketing environment, gathering market intelligence, organisational buying behaviour, and segmentation and positioning in industrial marketing.

Then, it goes on to give an insightful analysis of product mix, price mix, marketing channels, marketing control, and project marketing. The text concludes with a discussion on commercial terms, clauses and documents involved in the practice of industrial marketing. The text provides eleven case studies which lend a practical flavour to it, and illustrate the concepts discussed.

KEY FEATURES
- Shows the importance and selection criteria of marketing channels.
- Explains commercial clauses and contents of documents.
- Explains difference between product marketing and project marketing.
- Provides questions at the end of every chapter.

Interspersed with real-life examples, this book should also prove very handy to the practicing manager.

NEW TO THIS EDITION
- Four new chapters, namely, Review of Marketing Fundamentals, Industrial Marketing Environment, Negotiating Sales Deals and Key Account Management have been added.
- Keeping in mind the importance of case studies for both the students, as well as, practitioners, four new cases have also been added in this edition.
- Besides, material is added in most of the chapters to discuss some topics in more detail, or some sub-topic which were missing in the earlier edition.
- Problem questions added at the end of the chapters will help the students to understand the practical applications of marketing concepts in real business world.
- The concepts are supported by real-life examples, diagrams and tables to reinforce the understanding of the subject-matter.

CONTENTS:
INTERNATIONAL MARKETING

This well-established book, now in its third edition, continues to provide up-to-date information and data on International Marketing with emphasis on the Indian context. Retaining all the strengths of the previous editions, the new edition includes two new chapters on International Business Risks and International Marketing Strategies to meet the curriculum requirements. Besides, all the case studies have been updated to reflect the changing scenario of international marketing.

Primarily intended for postgraduate students of management, the book would also greatly benefit managers attending various management programmes.


R. SRINIVASAN, Professor, Department of Management Studies, Indian Institute of Science (IISc), Bangalore.

This well-received and appreciated book by the students of business schools across the country, in its Sixth Edition, provides cases that have been culled from the real business world and drawn from authentic sources.

In this revised edition, most of the cases have been thoroughly updated and following four new cases have been introduced:

- Indian Retail Industry
- Indian Airline Industry
- Hindustan Unilever Limited
- 3G Network in India

These cases highlight the business environment of different companies, specifically from the view of competitiveness, product development, market strategies and international business.

The facts and data given in the case studies are compiled and presented in a simple and easy-to-read style for better understanding of the market practices.

The book is meant as an adjunct text for postgraduate students of management. Besides, executives attending various management and development programmes would also be greatly benefited by reading this book.


The book offers a comprehensive review and analysis of various facets of retail communications, strategy and application. The author, with over two decades of experience in marketing, and teaching courses on retailing, provides a holistic and practical approach to the subject.

The book covers a wide range of topics—from understanding why retailers need to build brands, positioning to the various communication tools available to the retailers and the need to integrate retail communication for success. It contains numerous examples from Indian retailers in the areas of retail communication and provides many caselets to stimulate the application of many of the concepts discussed in the book.

The book is meant for the postgraduate students of management. Besides, it will also be useful to the students pursuing PG Diploma in Retail Communications Management/Integrated Marketing Communications.


Marketing is an essential business activity therefore it is necessary for students to understand its basic concepts and strategies.

The book has been written with the objective of providing students with the latest information on various marketing strategies in an organised and simplified format. Besides discussing fundamental concepts, the book also explains various emerging issues in marketing such as customer relationship marketing, rural marketing, direct marketing, green marketing and marketing of services. The subject matter has been presented in a simple and lucid manner. The text, supported with a variety of illustrations and diagrams, enables students to understand and grasp concepts easily.

Each chapter begins with the learning objectives to provide a bird’s eye view of the content. At the chapter-end, a summary is provided in bullet points to help students conceptualise and recapitulate the chapter quickly. Various objective and subjective type questions are provided to help students to test their knowledge and understanding of the topics before moving on to the next concept. Inclusion of case studies and examples of corporate sector provide a practical orientation to the text and help students to understand concepts in context of real-world situation.

The book is positioned for the undergraduate students of commerce, arts and management. However, it can also be recommended to postgraduate students of commerce (M.Com.) and management (MBA and other PG Diploma courses).

Marketing Practices in Developing Economy: Cases from South Asia

The Editors

RUBY ROY DHOLAKIA, Professor of Marketing and E-Commerce in the College of Business Administration, University of Rhode Island (URI).

SYED FERHAT ANWAR, Professor of Marketing, Institute of Business Administration (IBA), University of Dhaka.

KHALID HASAN, Managing Director, Nielsen Bangladesh (former ACNielsen).

I am happy to see this book of cases which provides a South Asia perspective and includes cases from Afghanistan, Bangladesh, India, Nepal, Pakistan and Sri Lanka. The cases cover a wide range—from agriculture to manufactured products—from micro level decisions to macro oriented ones.

—Philip Kotler

This comprehensive book has been written with the explicit objective of increasing the contextual knowledge regarding marketing organizations, problems and practices in South Asia.

Divided into seven sections, this book focuses on the marketing perspective of South Asia and its future with the help of the cases. It covers macro topics like how to develop a market and marketing institutions, as well as micro topics like branding and advertising strategies faced by the organizations operating in competitive and resource-challenged environments. While the problems and challenges described in each case reflect a situation unique to the organization, it also describes issues common to many developing countries.

The book adopts a problem-solving approach through the analysis of case studies that can be used by undergraduate and postgraduate students of management at college and university levels. It is equally beneficial for practising managers and marketing professionals.


Latest Print 2009 / 336 pp. / 17.8 x 23.5 cm
BUSINESS AND MANAGEMENT
Marketing (MARKETING RESEARCH)

Business Analytics: An Application Focus


Business Analytics refers to various categories of analytical approaches for modelling different business situations and arriving at solutions and strategies for optimal decision making in marketing, finance, operations, organization behaviour and other managerial processes.

Thus, Business Analytics today refers to different approaches for modelling and arriving at assessing and predicting risk, predicting market preferences, project feasibility, customer segmentation, inherent and underlying dimensions in consumer preferences, factors leading to probability of purchase, preferred segments in financial and credit card industry, probability of attrition in large organizations, etc.

The myriad of modelling and other analytical approaches which constitute Business Analytical applications in Indian Industry today include predominantly:

- Determining which attributes in a product are considered significant by the market and which are found to be significantly satisfactory—Gap Analysis.
- Analytical Modelling by Factor and Cluster Analysis.
- Analytical Modelling by Logistics Regression and Discriminant Analysis.
- Segmentation of primary target market by Heuristic Modelling such as RFM (recency, frequency, monetary) analysis.
- Segmentation of target market based on large databases using Decision Tree approaches such as CHAID (Chi-square Automatic Interaction Detection) and other Classification and Regression Trees.
- Determining Linkages between unobserved constructs such as customer satisfaction and factors leading to it, using Structural Equation Modelling (SEM).
- Determining relative preferences in consumer perceptions by Conjoint Analysis.

In this book, the author has discussed these analytical approaches following a classroom teaching format drawing from her extensive teaching experience spanning over 30 years. The book first discusses all important concepts and then case studies are discussed which emulate real life managerial situations.

The book is intended to serve as a textbook for MBA students for Business Analytics elective.


Latest Print 2014 / 252 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4819-6 / 275.00
**Marketing Research**

**RICHIA ARORA**, Assistant Professor, Symbiosis Centre for Management Studies, Symbiosis International University, Pune (Maharashtra).

**NITIN R. MAHANKALE**, Assistant Professor, Symbiosis Centre for Management Studies, Symbiosis International University, Pune.

Intended primarily as a text for undergraduate and postgraduate students of Management, this compact yet comprehensive book discusses the multidimensional aspects of Marketing Research in an accessible manner.

The book begins with an overview of marketing research, the type and scope of, and stages in marketing research, organization of marketing research in India, and research plan — its need, functions and types. Then it goes on to give a clear analysis of research design and its classification, descriptive and experimental research, as well as uses, methods and techniques in qualitative research. Besides, the book gives detailed description on marketing research process and attitude measurement, sampling methods and sample size determination, methods and techniques of data collection and data processing analysis. Finally, the book dwells on various statistical techniques, statistical packages, report writing, and different applications of marketing research in specific areas.

Besides students, professionals engaged in marketing research would find the book very valuable.

**DISTINGUISHING FEATURES**

- Provides indepth analysis of identifying, gathering, analyzing and interpreting primary and secondary data.
- Gives many examples, which are interspersed throughout the book, to illustrate the concepts discussed.
- Provides caselets for a better understanding of the topics covered.


Latest Print 2013 / 264 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4669-7 / 250.00

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**Effective Public Relations and Media Strategy, 2nd ed.**

**C.V. NARASIMHA REDDI**, the Editor of Public Relations Voice (a premier journal on Public Relations in India) and Senior Academic Consultant of Dr. B.R. Ambedkar Open University, Hyderabad.

The book, now in its second edition, aims at equipping the reader with the necessary tools for building a career in public relations and also assisting him or her in becoming an effective Public Relations Manager. The book strives to cater to the different areas of public relations, such as public relations in banks, tourism, NGOs, public transport, municipal government, media, and global public relations.

In this text, Professor Narasimha Reddi compresses within the covers of a single volume his many decades of teaching and professional experience. He gives a masterly exposition of the theory and best practices of the profession.

Divided into six parts, the second edition focuses on the application of Internet and social media in the practice of Public Relations. It contains six new chapters and five new case histories, which are in tune with changing needs, as well as an epilogue projecting Mahatma Gandhi as the world’s greatest Public Relations communicator.

The book is primarily intended as a text for students of Public Relations, Journalism, Mass Communication, and Advertising. In addition, it should be of great benefit to the teaching community and public relations practitioners.

**NEW TO THIS EDITION**

Incorporates five new Case Studies reflecting current trends in PR and Advertising.


Latest Print 2014 / 640 pp. / 16.0 × 24.1 cm
Services are widely used by people practically in all aspects of life. The globalised era is seeing services being used by a wide cross-section of society from the corporate to the man.

The Fourth Edition of the book educates its readers about how marketing strategies are changing and evolving through times.

The new edition comes with updated case studies on various service sectors, such as Hospitality and Tourism (Thomas Cook, Karnataka State Tourism Development Corporation (KSTDC) Ltd., and (Cafe Coffee Day). A new case study “Indian Airline Industry”, has also been introduced to add to the diversity of services. Finance (Credit Card Business of Standard Chartered) and Information Technology are also updated (Infosys and SAP). The cases, set within the Indian context, lend a practical dimension to the subject, familiarizing the students with the developments in the Services Marketing area in India.

The new edition, with its emphasis on recent data and the contemporary Services Marketing scenario, is an ideal companion for the budding managers. It should also be of great use to the practising managers attending various Management Development Programmes (MDPs) and Executive Development Programmes (EDPs).

NEW TO THIS EDITION

• A new case study “Indian Airline Industry” has been introduced.
• All case studies of the previous edition have been updated with latest information and developments in the company.
• Chapter 2 and Chapter 15 of the book have been revised with latest data and illustrations.


Latest Print 2014 / 304 pp. / 16.0 x 24.1 cm

Supriya Biswas, Professor, Marketing and IT, NSHM Business School, Kolkata.

The role of relationship marketing in the current business scenario has become significant as maintaining good relationships with various sections of society, especially the customers, is important for achieving organisational objectives.

The book encapsulates all the essential aspects of relationship marketing in an easy-to-understand manner. It has been thoroughly revised and enlarged in the Second Edition and incorporates topics based on emerging concepts of marketing and technology, including relationship parameter in brand identity, service recovery paradox, adversity quotient of relationship managers, impact of social networking on customer relations, as well as applications of cloud and mobile computing in the practice of relationship marketing.

Inclusion of new and contemporary case studies from industries—Toyota logo, Removing pain points: How Coco-Cola’s low-cost solar cooler is helping Coke spread its wing in villages, and Mobile computing in general insurance business, provides a practical orientation to the text and help students to understand concepts of relationship marketing in the context of real-world situation. Apart from these, case assignments have been developed on various dimensions of relationship marketing.

Intended as a textbook for the postgraduate students of management, the book is equally useful for relationship managers, executives, and sales and marketing professionals.


Latest Print 2014 / 480 pp. / 16.0 x 24.1 cm
Strategic Marketing: Making Decisions for Strategic Advantage

MUSADIQ A. SAHAF, Professor of Strategic Marketing, Department of Management Studies, University of Kashmir, Srinagar.

This systematically organized and accessible text gives an in-depth analysis of the multidimensional aspects of strategic marketing. It is a harmonious blend of theoretical aspects and real-world applications, equipping the students with the requisite knowledge and skills for understanding the subject. It illustrates how to design effective marketing strategies to compete in a highly dynamic and competitive market.

Divided into five parts, the text attempts to bridge the gap between the science and the art of marketing strategy. The book provides a stimulating learning environment. Initially, it gives a thorough analysis of the framework that would help managers make their businesses effective. Then it goes on to discuss such topics as customer behaviour and customer relationship management, along with competitor analysis. The text concludes with the strategies that fall within the scope of marketing mix, viz. product, marketing communication, personal selling, distribution and pricing.

Primarily intended as a text for postgraduate students of management and commerce, the book would also be useful to practising managers.


Latest Print 2013 / 528 pp. / 17.8 x 23.5 cm

Basics of Distribution Management: A Logistical Approach

SATISH K. KAPOOR is Professor of Marketing at the University Business School, Panjab University, Chandigarh. PURVA KANSAL is a visiting faculty at the University Business School, Panjab University, Chandigarh.

This introductory text is focused on the essential concepts, tools and strategies that comprise Distribution Management. It emphasizes the idea that distribution management is an effective marketing strategy and a potent competitive tool. Defining the concept of physical distribution in the initial chapter, the book details the objectives, functions and components of all the activity centres of physical distribution, from a systems approach. An exclusive chapter is devoted to transportation functions, highlighting the features of interstate movement of goods and the legal procedures related to them. Sufficient coverage is also given to related topics such as distribution control, performance evaluation and organization of physical distribution, besides the ‘trade-off’ concept.

The book, with its wide coverage of topics, should prove to be of immense value to undergraduate students in Business Administration and Business Management.

DISTINGUISHING FEATURES
• Includes numerous line diagrams and photographs that enhance presentation and understanding of the concepts
• Gives real-world examples and short case studies of well-known Indian and foreign manufacturers.
• Provides questions at the beginning of each chapter setting the objectives, besides giving chapter-end summary and exercises, which stimulate discussion.


Latest Print 2010 / 272 pp. / 16.0 x 24.1 cm

PHI Learning: Publications
BUSINESS AND MANAGEMENT
Marketing (Supply Chain Management)

Business Process Outsourcing: The Supply Chain of Expertises

VINOD V. SOPLE, Professor and Deputy Director (Academics) at ITM Business School, Navi Mumbai.

This book is a comprehensive presentation of the fundamental concepts of business process outsourcing (BPO) and its applications in the Indian industrial context. It offers a strategic framework for BPO management, which is crucial for creating competitive advantage for a business enterprise. The book is designed for MBA and PGDM students as well as students in BPO training schools and executives in BPO sector.

The text, organized into sixteen chapters, contains a wealth of useful and practical information on the following facets of the BPO industry:

- Strategic, tactical, control and operational aspects of BPO administration
- BPO business models
- Regulatory and legal framework of the BPO industry
- Terms, conditions, responsibilities and obligations involved in the BPO contract and service level agreement
- Service issues regarding supplier selection and process quality
- Criteria for performance evaluation of service providers
- Challenges involving upward shift in service value chain as well as human resource management

Chapter-end review questions help in easy comprehension of the underlying principles. The appendices contain important additional information about the BPO industry.

CONTENTS:

Latest Print 2013 / 248 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3815-9 / 250.00

Logistics Management, 2nd ed.

SATISH C. AILAWADI, Director at KJ Somaiya Institute of Management Studies and Research, Mumbai.
RAKESH P. SINGH, Director, Durga Devi Saraf Institute of Management Studies, Mumbai.

To retain their market share in today’s competitive business, companies are coming up with high value, low price products. To cut their costs, they are striving hard to identify the cash-consuming areas in their operations. Logistics is one of them, as its scope ranges from the procurement and management of the raw materials through to the delivery of the final product. This book, now in its Second Edition, continues to provide theoretical and practical expertise in logistics management.

The book begins with an introduction to the elements of logistics management and then moves on to explain operating objectives of integrated logistics, barriers to internal integration and principles of logistics information. It also deals with forecasting, inventory management policies, warehousing and highlights various aspects of logistics management and logistical organization. The book contains case studies in the Indian context to give a practical flavour to the subject.

In this edition, two new chapters, namely, Materials Handling and Packaging and Integrated Global Logistics are included to widen the scope of the subject.

Primarily intended to fulfil the requirements of the students of logistics management, the text may well serve the needs of practising professionals also.

CONTENTS:

Latest Print 2013 / 216 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4504-1 / 225.00
BUSINESS AND MANAGEMENT
Marketing (Supply Chain Management)

**Logistics Management for International Business: Text and Cases**

S. SUDALAIMUTHU, Reader, Department of Banking and Technology, Pondicherry Central University, Pondicherry.
S. ANTHONY RAJ, faculty, Department of International Business, CMS College of Science and Commerce, Coimbatore, Tamil Nadu.

In today’s globalised economic development, international transactions form an integral part of economic activities. Logistics Management encompasses planning and management of all activities, involving sourcing and procurement of cargo by effective and economically feasible coordination and collaboration with channel partners, and provision of product and service packages from point-of-origin to point-of-consumption at the right time and at the right place.

This book gives, with theoretical and practical expertise, a comprehensive coverage of the logistic concepts, techniques, and their applications in the world cargo industry. Besides, it provides an in-depth understanding of the strategic framework of Logistics Management, the technologies, and the components used in logistic operations. It also covers export-import trade and documentations, shipping formalities, warehouse and inventory management, ERP concepts, logistics operation of major ports—and more.

This book is primarily intended as a text for postgraduate students of Management (MBA/MIB) and Commerce (M.Com.IB). It will also prove useful for the students of those engineering disciplines where the subject is prescribed as an elective course. In addition, practising managers in international business will find the book valuable as a reference.


**Supply Chain Management: Concepts and Cases**

RAHUL V. ALTEKAR, Director—Strategic Services, JDA India, Visiting Faculty—NITIE, Welingkars.

In response to the increasing significance attached to supply chain management in both academic and professional areas, this text builds a bridge and highlights the relationship between various disciplines of SCM like demand planning, manufacturing planning, logistics planning, analytical IT management, global e-biz modeling, performance benchmarking etc.

Primarily intended to address the typical and general syllabus requirements of postgraduate management programmes, and undergraduate and postgraduate engineering programmes, this book also caters to the needs of the industry professionals in the supply chain domain.

**KEY FEATURES**

- Comprehensive treatment of SCM concepts
- In-depth coverage of topics like CODP, CPFR, JIT-II, VMI, TPL, FPL, SCEM, SCOR etc.
- Reinforcement of concepts through Indian case studies
- Focus on SCM implementation and practical issues
- Profusely used flow diagrams and figures.


Latest Print 2013 / 464 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-2859-4 / ₹ 325.00

**Latest Print 2009 / 416 pp. / 17.8 × 23.5 cm**
ISBN-978-81-203-3792-3 / ₹ 325.00

PHI Learning: Publications
BUSINESS AND MANAGEMENT
Production Management (BUSINESS STATISTICS)

K. MURALIDHARAN, Professor and Head, Department of Statistics, The Maharaja Sayajirao University of Baroda, Vadodara. He is also the Director of Populations Research Centre at the same university.

A. SYAMSUNDAR, Deputy General Manager (Research and Development) at Visakhapatnam Steel Plant, Visakhapatnam.

A fine blend of the three disciplines, viz. quality, reliability and maintainability, this book provides a clear understanding of the concepts and discusses their applications using statistical tools and techniques. The concepts are critically assessed and explained to enable their use for management decision-making.

The book describes many current topics such as six sigma, capability maturity model integration (CMMI), process data management, reliability system models, repairable system models, maintainability assessment and design and testing concepts.

It is intended as a textbook for the undergraduate students of Mechanical Engineering and Production and Industrial Engineering. The book will also be useful to the postgraduate students of Applied Statistics, Quality and Reliability, and Quality and Productivity Management as well as to the management and engineering professionals.

KEY FEATURES
- Provides charts and plots to explain the concepts discussed.
- Gives an account of most recent developments.
- Gives illustrations of practical situations where tools can be applied immediately.
- Interspersed with plenty of worked-out examples to reinforce the concepts.
- Includes chapter-end exercises to drill the students in self-study.


The primary objective of this text is to help students to think clearly and critically and apply the knowledge of Business Statistics in decision making when solving business problems.

The book introduces the need for quantitative analysis in business and the basic procedures in problem solving. Following an application-based theory approach, the book focuses on data collection, data presentation, summarizing and describing data, basic probability, and statistical inference. A separate chapter is devoted to show how Microsoft Excel can be used to solve problems and to make statistical analyses. It contains specimen Excel Worksheets illustrating how the problems of each chapter are solved using Excel functions and formulas. A large number of real-world business problems from various business professions such as finance, medical, psychology, sociology, and education are also included.

This textbook is primarily intended for the undergraduate and postgraduate students of management and postgraduate students of commerce.

The text helps students to:
- Understand the meaning and use of statistical terms used in business statistics
- Use graphical and descriptive statistics to identify the need for statistical inference techniques
- Perform statistical analyses
- Interpret the results of statistical analyses
- Apply statistical inference techniques in business situations
- Use computer spreadsheet software to perform statistical analysis on data
- Choose the appropriate statistical tool from the collection of standard analytic methods


Latest Print 2014 / 632 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4985-8 / 495.00

PHI Learning: Publications

P.N. JANI, former Associate Professor of Statistics and Head, Department of Statistics, Sardar Patel University, Vallabh Vidyanagar, Gujarat.
This is an authoritative treatise, a complete guide and a reference book of materials management. It deals with all aspects of materials management including procurement, inventory, warehousing, production logistics, inspection and finance. Summaries in the form of A-Z points appear at the end of each chapter. Probably the only handbook on the Total Materials Function, this book is ideal for both practising managers as well as students of Management and Engineering.


800 pp. (approx.) / 17.8 × 23.5 cm ISBN-978-81-203-4801-1 / FORTHCOMING

Maintenance Engineering and Management, 2nd ed.

R.C. MISHRA. Formerly, Senior Professor, Administrative Staff College of India, Hyderabad.

This second edition of the book continues to focus on the basics of the expanding subject, with a broad discussion of management aspects as well, for the benefit of the engineering students. It explains the concept of a maintenance system, the evaluation of its maintenance functions, maintenance planning and scheduling, the importance of motivation in maintenance, the use of computers in maintenance and the economic aspects of maintenance. This book also discusses the manpower planning and energy conservation in maintenance management. Presented in a readable style, the book brings together the numerous aspects of maintenance functions emphasizing the importance of this discipline in the engineering education.

In this edition a new chapter titled, Advances in Maintenance (Chapter 21), has been included to widen the coverage of the book. Besides the students of engineering, especially those in streams of mechanical engineering and its related disciplines such as mining, industrial and production, this book will be useful to the practising engineers as well.


PHI Learning: Publications
To keep both students and managers abreast of the changes and emerging trends in the field of Materials Management, this second edition has been thoroughly revised and updated with the latest procedures and applications. It gives exhaustive coverage of the operational details of stores and purchases, standardization and quality control, value analysis and value engineering as well as the legal aspects of purchasing and the technicalities of warehousing.

A great amount of new material and some new chapters have been incorporated. Numerous practical examples and illustrative solutions to problems are given. Mathematical concepts underlying inventory control, linear programming, etc. are explained. Case studies based on real-life situations have been included.

Materials Management: A Supply Chain Perspective (Text and Cases), 3rd ed.

A.K. CHITALE, Academic Advisor, and former Director, Shri Govindram Seksaria Institute of Management and Research, Indore.

R.C. GUPTA, Professor and Head, Department of Industrial and Production Engineering, SGSITS, Indore.

This textbook, now in its third edition, continues to provide a comprehensive coverage of the different aspects of materials management in a student-friendly manner. The book gives a clear introduction to materials management, and discusses topics such as classification, codification, specifications and standardization of materials, which aid in effective purchasing. In view of their economic importance, materials planning and budgeting too have been covered in sufficient detail. Besides explaining the fundamental principles of stores management and materials handling, the text gives an in-depth analysis of inventory control with several illustrative examples. It also highlights the principles of purchasing, nature of purchasing process, value analysis and quality assurance.

In the second edition, five new chapters on capital purchasing, government purchasing, international purchasing, import substitution, and logistics, warehousing and distribution management were added to cater to the needs of the students who are interested in having an initial exposure to the emerging area of logistics and supply chain management. Besides, chapter-end review questions have been added to probe a student’s grasp of the subject matter.

Intended primarily for the undergraduate and postgraduate students of production engineering/industrial management and engineering, and MBA, this book would also be useful to the practicing managers.


Business Process Automation

SANJAY MOHAPATRA, Associate Professor in Information Systems at Xavier Institute of Management, Bhubaneswar (XIMB).

This book discusses the major trends in Business Process Automation (BPA) and explains how BPA technologies and tools are applied in practice. It introduces the students to the concepts of BPA and describes the need for automation in business process management.

The book illustrates live examples of different functions of an enterprise where automation has been successfully implemented to reap business benefits. It elaborates the applications of BPA in various sectors such as HR and payroll, marketing, e-governance, knowledge management and banking. The text also discusses in detail the role of Chief Information Officer (CIO) as a change agent for designing and implementing automation initiatives. Return-on-Investment (ROI) calculations have been shown as a business case for automating business processes. Evaluation criteria for deciding which software package to be implemented have been thoroughly explained.

KEY FEATURES

- Provides case studies at the end of all chapters to help the students for easy understanding of the concepts discussed.
- Includes chapter-end questions to test students’ comprehension of the subject.
- Presents a glossary of technical terms.

The book is designed for the postgraduate students of management. It would be useful for the professionals and practitioners for implementation of process automation in organizations as well.

A successful Operations Management (OM) requires a totality perspective: it has to have a cross-functional approach, involving all operations functions, such as Manufacturing, Logistics, Accounting, Finance, and Marketing. This book comprehensively delves on all components of Operations Management, and pans out practical approaches for their effective and efficient handling.

The book shows how Operations Management integrates the Top management, i.e. strategic level; Middle management, i.e. tactical level; and Functional management, i.e. operational level functions, to complement each other. Divided into 11 sections containing 28 chapters, the book extensively elucidates processes to formulate successful products and services, tools and measures of quality control standards (TQM), and various effective Supply Chain Management techniques. Along with theoretical expositions, the concepts are exemplified with Real-Life Cases and Examples throughout.

The book is primarily intended for the postgraduate students of Management and Engineering—Production, Industrial and Mechanical. Also, the book will be equally useful for the management and engineering professionals.


The book provides a solid and comprehensive introduction to the core tasks of operations management with practical guidance on how to solve problems through computer programming.

This well-received book, now in its second edition, continues to provide a number of optimization algorithms which are commonly used in computer-aided engineering design. The book begins with simple single-variable optimization techniques, and then goes on to give unconstrained and constrained optimization techniques in a step-by-step format so that they can be coded in any user-specific computer language. In addition to classical optimization methods, the book also discusses Genetic Algorithms and Simulated Annealing, which are widely used in engineering design problems because of their ability to find global optimum solutions.

The second edition adds several new topics of optimization such as design and manufacturing, data fitting and regression, inverse problems, scheduling and routing, data mining, intelligent system design, Lagrangian duality theory, and quadratic programming and its extension to sequential quadratic programming. It also extensively revise the linear programming algorithms section in the Appendix. This edition also includes more number of exercise problems.

The book is suitable for senior undergraduate/postgraduate students of mechanical, production and chemical engineering. Students in other branches of engineering offering optimization courses as well as designers and decision-makers will also find the book useful.

KEY FEATURES
• Algorithms are presented in a step-by-step format to facilitate coding in a computer language.
• Sample computer programs in FORTRAN are appended for better comprehension.
• Worked-out examples are illustrated for easy understanding.
• The same example problems are solved with most algorithms for a comparative evaluation of the algorithms.

Production and Operations Management

R.B. KHANNA, a former Indian Army officer, is currently Professor at Indian Institute of Planning and Management (IIPM) Jaipur.

This well-balanced text with its fine blend of theory and applications, gives an in-depth analysis of the multi-dimensional aspects of production and operations management in an easy-to-understand style. Employing an innovative approach, the author shows how the use of modern advanced technology gives a fillip to production processes and significantly helps production and operations management.

Divided into six parts, this textbook exposes the readers to the challenges of production and operations management. The concepts are illustrated with the help of several interesting examples culled from the Indian business scenario.

The book is suitable for MBA students, undergraduate and postgraduate students of Mechanical Engineering, Production Engineering and Industrial Engineering. Besides, this book would also be a very handy reference for practising managers.

An instructor’s manual/CD containing PowerPoint slides and solutions to chapter-end problems is available for the teachers.

CONTENTS:

This widely adopted and well-established book, now in its Third Edition, provides the students of management and engineering with the latest techniques in production and operations management, considered so vital for maximizing productivity and profitability in business. What distinguishes the text is a comprehensive coverage of topics such as contract laws, capacity requirement planning, vendor evaluation including AHP method, quality function deployment, and enterprise resource planning.

The new topics, which are of current interest, along with the characteristic features and easy-to-read style, would enhance the value of this text. The book is primarily intended as a text for postgraduate students of management, undergraduate students of mechanical engineering and undergraduate and postgraduate students of industrial, and production engineering courses. This profusely illustrated and well-organized text with its fine blend of theory and applications would also be useful for the practicing professionals.

NEW TO THIS EDITION
• Objective Type Questions at the end of each chapter
• Additional example problems in Chapters 5 and 17
• XYZ, VED, FSN, and SDE analyses
• Process planning case study in Chapter 2
• Case Study Questions in Chapters 2-7, 9-11, and 13-15
• Heuristic to minimise total tardiness in single machine scheduling

KEY FEATURES
• Focuses on productivity related concepts and techniques
• Provides solved examples at suitable places
• Includes sufficient tables and diagrams to illustrate the concepts
• Updates the reader with many efficient and modern algorithms
• Contains Answers to selected questions and Objective type questions


Latest Print 2013 / 720 pp. / 17.8 × 23.5 cm
This comprehensive and up-to-date text, now in its Second Edition, describes how the latest techniques in production planning and control are applied to contemporary industrial setups so as to meet the ever-increasing demands on industrial organizations for better quality of services, faster delivery of products and for adapting to the rapid changes taking place in the industrial scenario. With the demands in the industrial arena increasingly tending to be lumpy, the most effective strategy for planning and controlling production processes cannot be a static, preconceived one. Instead, it is one that is flexible and is capable of adapting to the erratic changes in demand patterns. Evolving such a strategy requires more of practical skill than mere theoretical knowledge of the subject.

This book explores the demands of the present day industrial environment and the techniques for addressing these demands through a number of case studies drawn from Indian industries. The efficacy of various planning strategies, the methods for implementing them, and their suitability for different industries have been clearly explained in relation to these cases. While the essentials of theory have been covered in a simple and straightforward style, the stress is on developing the practical skills required to tackle the unpredictable problems and the unforeseen demands that pose a formidable challenge to modern industries. The book places as much emphasis on the principles of heuristic techniques as on the systematic approach to production planning.

This book would serve as a useful textbook to postgraduate students of management as well as undergraduate students of industrial engineering. It will be equally useful to the teaching community and the practicing professionals.


PHI Learning: Publications
The second edition of this well-organized and comprehensive text continues to provide an in-depth coverage of the theory and applications of operations research. It emphasizes the role of operations research not only as an effective decision-making tool, but also as an essential productivity improvement tool to deal with real-world management problems.

This edition includes new carefully designed numerical examples that help in understanding complex mathematical concepts better. The book is an easy read, explaining the basics of operations research and discussing various optimization techniques such as linear and non-linear programming, dynamic programming, goal programming, parametric programming, integer programming, transportation and assignment problems, inventory control, and network techniques. It also gives a comprehensive account of game theory, queueing theory, project management, replacement and maintenance analysis, and production scheduling.

NEW TO THIS EDITION

- Inclusion of quantity discount models for transportation problem.
- Updated inventory control model and detailed discussion on application of dynamic programming in the fields of cargo loading and single-machine scheduling.
- Numerous new examples that explain the operations research concepts better.
- New questions with complete solutions to selected problems.

This book, with its many student friendly features, would be eminently suitable as a text for students of engineering (mechanical, production and industrial engineering), management, mathematics, statistics, and postgraduate students of commerce and computer applications (MCA).

BUSINESS AND MANAGEMENT
Production Management (Operations Research)

Operations Research

N.K. TIWARI, Director, SCOPE Engineering College, Bhopal (Madhya Pradesh). A winner of the Madhya Pradesh Government’s Young Scientist Award.

SHISHIR K. SHANDILYA, Department of Computer Science and Engineering, TRUBA College of Engineering and Information Technology, Bhopal. He is a winner of the Young Scientist Award and Computer Wizard Award of the Madhya Pradesh Government.

Primarily intended for postgraduate students of management and computer applications, this book presents the theory and applications of operations research in an easy-to-read style. It introduces the readers to various models of operations research, such as transportation model, assignment model, inventory model, queuing model, replacement model, sequencing model, and integer programming model. The various methods to solve real-life problems faced by managers are also fully analyzed. Separate chapters are devoted to Linear Programming, Decision Theory, Game Theory, Dynamic Programming, and Project Management, which greatly help the decision-making process.

The text features numerous fully worked-out examples, a fairly large number of exercises, and end-of-chapter theoretical questions which enhance the value of the text.

Besides postgraduate students of management (MBA), computer applications (MCA), commerce, mathematics, and statistics, students of engineering will also find this text extremely useful.


Latest Print 2013 / 304 pp. / 17.8 x 23.5 cm

Operations Research

NITA H. SHAH, Reader, Department of Mathematics, Gujarat University, Ahmedabad.

RAVI M. GOR, Dean, St. Kabir Institute of Professional Studies, Ahmedabad.

HARDIK SONI, Lecturer, Chimanbhai Patel Institute of Computer Applications, Gujarat University, Ahmedabad.

This comprehensive book deals with the theoretical aspects of operations research, and explains the concepts with practical examples. It begins by focusing on the need and prerequisites of operations research and moves on to discuss topics such as linear programming, integer programming, nonlinear programming, assignment problems, and inventory models in sufficient detail. Besides, this text also explains how to achieve different goals in the order of priority to optimize the objective function, various criteria of decision making under certainty, uncertainty and risk, and different techniques of analyzing the time involved in completing the project and the related cost.

KEY FEATURES
• Gives well-defined algorithms to illustrate the different techniques of operations research.
• Inventory problems are discussed with calculus.
• Provides worked-out examples in each chapter to illustrate the concepts discussed.

This text is intended for the undergraduate and postgraduate students of Mathematics, Statistics, Engineering, and postgraduate students of Computer Applications and Business Administration. In addition, practising executives, consultants and managers will also find the book very useful.


Latest Print 2013 / 576 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-3128-0 / ` 350.00
This comprehensive book provides the students with the basic knowledge of the processes involved in operations research and discusses the techniques of solutions to problems and their applications in daily life.

Beginning with an overview of the operations research models and decision-making, the book describes in detail the various optimization techniques such as linear and non-linear programming, integer linear programming, dynamic programming, genetic programming, and network techniques such as PERT (program evaluation review technique) and CPM (critical path method). It also explains the transportation and assignment problems, queuing theory, games theory, sequencing, replacement and capital investment decisions and inventory. Besides, the book discusses the Monte Carlo simulation techniques for solving queuing, demand forecasting, inventory and scheduling problems and elaborates on genetic algorithms.

Each mathematical technique is dealt with in two parts. The first part explains the theory underlying the methodology of solution to problems. The second part illustrates how the theory is applied to solve different kinds of problems.

This book is designed as a textbook for the undergraduate students of mechanical engineering, electrical engineering, production and industrial engineering, computer science and engineering and information technology. Besides, the book will also be useful to the postgraduate students of production and industrial engineering, computer applications, business administration, commerce, mathematics and statistics.

### BUSINESS AND MANAGEMENT

**Production Management (Operations Research)**

**Operations Research: Principles and Applications, 2nd ed.**

G. Srinivasan, Professor, Department of Management
Studies, Indian Institute of Technology Madras. A member of the Society of Operations Management, India.

This text, now in the Second Edition, continues to provide students with a clear, well-structured and comprehensive treatment of the theory and applications of operations research. The methodology used is to first expose the students to the fundamental concepts through a numerical illustration and then explain the underlying theory wherever required. The inclusion of a case study in each chapter of this second edition has made learning easier and more effective.

The book introduces the readers to various models of operations research, such as the transportation model, the assignment model, the inventory model, the queuing theory and the integer programming model. The various techniques to solve OR problems faced by managers are also discussed. Separate chapters are devoted to linear programming, dynamic programming and quadratic programming which greatly help in the decision-making process.

The text facilitates easy comprehension of topics by the students due to inclusion of:
- Examples and situations from the Indian context.
- Numerous exercise problems arranged in a graded manner.
- A large number of illustrative examples.

The text is primarily intended for the postgraduate students of management, computer applications, commerce, mathematics and statistics. Besides, the undergraduate students of mechanical engineering and industrial engineering will find this book extremely useful. In addition, the text can also be used as a reference by OR analysts and operations managers.

**CONTENTS:**

- Preface
- Acknowledgements
- Linear Programming Formulations
- Linear Programming—Solutions
- Duality and Sensitivity Analysis
- Transportation Problem
- Assignment Problem
- Advanced Linear Programming
- Integer Programming
- Network Problems
- Travelling Salesman and Distribution Problems
- Dynamic Programming
- Basic Queueing Models
- Non-linear Programming
- Deterministic Inventory Models
- Bibliography
- Index

**Latest Print 2014 / 532 pp. / 17.8 x 23.5 cm**

ISBN-978-81-203-4208-8 / 375.00

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**Quantitative Techniques for Decision Making, 4th ed.**

M.P. Gupta, former Head and Dean, Faculty of Management Studies (FMS), University of Delhi.

R.B. Khanna, a former Indian Army officer, is currently Professor at Indian Institute of Planning and Management (IIPM) Jaipur.

This thoroughly revised and well-received book, now in its Fourth Edition, continues to give an in-depth and incisive analysis of the various mathematical techniques required for managers in their decision-making process. The book provides a clear understanding of the practical utility of mathematical modelling and techniques, such as linear programming, integer programming, goal programming, dynamic programming, inventory models, decision theory, game theory, network analysis, queuing, simulation and Markov analysis, for solving real-life problems. The book lays emphasis on the practical applications of the techniques rather than their rigorous mathematical treatment. It also discusses probability and probability distributions—essential to tackling the everyday uncertainties of life.

The book is primarily intended as a textbook for undergraduate and postgraduate students of management, postgraduate students of commerce, students of Master of Financial Control course, and undergraduate students of industrial and production engineering. In addition, practitioners will also find the book immensely helpful in their day-to-day decision-making process.

**NEW TO THIS EDITION**

- A section describing the construction of activity on node (AON) networks for CPM and PERT networks has been included considering that most software designed for network analysis plot networks in this format.
- An appendix on 'Mathematics for Managers' which includes the topics of Matrix Algebra and Differential Calculus.
- New solved and unsolved problems.

**CONTENTS:**

- Preface
- Preface to the First Edition
- Decision Making: A Quantitative Approach
- Linear Programming: Graphic Method
- Linear Programming: Simplex Method
- Transportation Model
- Assignment Model
- Integer Programming
- Goal Programming
- Dynamic Programming
- Probability Distributions
- Inventory Models
- Replacement Models
- Network Models: CPM and PERT
- Decision Theory
- Theory of Games
- Sequencing
- Queuing Theory
- Simulation
- Markov Analysis

**Answers to Concept Quiz. Answers to Selected Questions. Index.**

**Latest Print 2014 / 772 pp. / 17.8 x 23.5 cm**

ISBN-978-81-203-4278-1 / 495.00

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**PHI Learning: Publications**
This book is specially designed for a course in Quantitative Techniques taught to MBA students. It provides the students with a thorough introduction to basic quantitative tools required to perform analytical evaluations and arrive at logical decisions.

The second edition of the book essentially retains the flavour of the first edition. Concepts have been explained in an easy to understand language and emphasis is on practical applications rather than rigorous mathematical treatment. As far as possible, detailed proofs and axioms associated with pure mathematics have been avoided. The text in the second edition has been suitably modified for giving better clarity. Nearly fifty solved examples have been added to various chapters to enable students to understand the nuances of problem solving. Fifty unsolved problems have also been added to give ample scope to the student for practice. The book also includes chapters on transportation models, assignment models and network analysis.

**KEY FEATURES**

- Learning objectives at the beginning of each chapter enable students to focus on important points of a chapter.
- Case studies and real life problems to connect students to the real-world situations.
- Worked examples to enhance student comprehension of the subject.
- Numerous well-balanced chapter-end exercises with answers to help students attain confidence and master the concepts.
- Illustrations on solutions to problems with the help of computer software.
- Summary at the end of each chapter to help students review the key concepts.

BUSINESS AND MANAGEMENT

Production Management (Operations Research)

Research Methodology

MUKUL GUPTA, Professor and Head—MBA at G.L. Bajaj Institute of Technology and Management, Greater Noida.

DEEPA GUPTA, Professor—MBA at G.L. Bajaj Institute of Technology and Management, Greater Noida.

This well-organised and lucid text on Research Methodology is intended to fulfill the felt-need for an introductory, accessible and student friendly book. Written with the aim of making the teaching and learning of research methods and methodology simple, the book provides theoretical information in an operational manner about the various methods, techniques and procedures followed in research.

This book based on the practical experiences of the authors as researchers, practitioners and teachers intends to cater to the needs of students of MBA, BBA, Humanities and Social Sciences. The book will also be of immense use to the researchers, practicing managers and public health organisations.

KEY FEATURES

• Contains case studies and sample questionnaires.
• Covers brief knowledge of statistics and its applications required in research.
• Objective type questions, review questions, sample question papers and previous years’ examination papers have been included for brushing up of the knowledge.
• Gives working knowledge of various useful computer software used in the research analysis such as SPSS, Excel etc.
• Report writing is explained in the systematic manner explaining the process, layout, types, mechanics involved, various principles and precautions to be taken while writing a good report to make the research worth.

CONTENTS:


Latest Print 2013 / 224 pp. / 17.8 × 23.5 cm ISBN-978-81-203-4381-8 / ₹ 225.00

Research Methodology: A Guide for Researchers in Management and Social Sciences

BILL TAYLOR, Formerly a Principal Lecturer at Sheffield Business School (UK).

GAUTAM SINHA, Professor, Vimal Gupta School of Management and Professor-in-Charge (Training and Placement) Indian Institute of Technology Kharagpur.

TAPOSH GHOSSHAL, Assistant General Manager (Academic), Management Training Institute, SAIL, Ranchi.

Intended to serve as a text for postgraduate students of commerce, management, and social sciences, and especially for the first-time researchers, this well-organized book deals with the variety of research methods used in management and social sciences, with particular emphasis on the implementation of these methods. It offers readers practical guidelines for research and directs them through all the stages of research—from identifying a viable research project to the submission of a dissertation, report, or research article. The text identifies three dimensions of research methodology—research strategies, research methods and research data—that provide a structure for the book.

KEY FEATURES

• Many real-world examples extracted from actual research projects of students will help the readers develop their research skills.
• Both quantitative and qualitative research methodologies are provided in order to help readers make informed choices about methods.
• Statistical appendices are provided to acquaint readers with the underlying mathematical concepts.

CONTENTS:


This comprehensive book gives a conceptual, analytical and
evaluative study of the principles and practices of Project
Management and Control systems in a student-friendly
manner.

The book provides an overview of project management, and
gives a detailed analysis of project life cycle and its different
phases, identification of project opportunities, and sources of
project ideas. It describes in detail various considerations and
priorities in setting up projects at macro and micro
levels, project appraisal, and various types of organisation
structures. Besides, the book also explains the different ways
and means of financing projects, the sources of finance
nationally and internationally, the need for estimation of
project cost, and different aspects of post-project review.
Finally, the book dwells on computer aided project
management to demonstrate how the computer can help the
management in handling all project activities efficiently.

Primarily intended as a text for the postgraduate students of
commerce and management, the book can also be
authoritatively used by the researchers, project managers,
consultants, and corporate policy and decision makers.

KEY FEATURES
• Describes various aspects of contract management in great
detail with live examples.
• Explains the risks encountered by MNCs in an
ternational project and the remedies available to handle
these risks effectively.
• Contains a Glossary to explain the core concepts.
• Provides a large number of graphs, charts, tables,
ilustrative examples and appendices to help readers in
analytical understanding of the subject.


Latest Print 2012 / 376 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4450-1 / 350.00

BUSINESS AND MANAGEMENT

Project Management and Control

SUBHASH CHANDRA DAS,
Management Consultant, is Former
Director (Finance), Hindustan
Paper Corporation (HPC) Limited,
and a visiting faculty in many
Universities and B-Schools.

Lean and Agile Manufacturing:
Theoretical, Practical and Research Futurities

S.R. DEVADASAN, Professor in
the Production Engineering
Department at the PSG College of
Technology, Coimbatore.

M. MOHAN SIVAKUMAR, Faculty of Mechanical Engineering
Department at the PSG Polytechnic College, Coimbatore.

R. MURUGESH, Principal of Darshan Institute of Engineering and Technology, Rajkot.

P.R. SHALIJ, Assistant Professor in the Production Engineering
Department at the Government Engineering College, Thrissur,
Kerala.

Contemporary fastidious companies are required to
eliminate wastes and offer value-added products and
services to the customers, which requirement is fulfilled by
adopting the paradigm called ‘lean manufacturing’. On the
other side, futuristic companies surge towards reaching the
twenty-first century mission by reacting quickly in
accordance with the dynamic demands of the modern
customers, for which researchers have been developing a
paradigm called ‘agile manufacturing’. Although various
techniques and tools are applied, cohesive procedures
are yet to be evolved to implement these paradigms
systematically and successfully in companies. In this context,
this book is evolved to address students, academics,
practitioners and researchers for gaining theoretical,
practical and research futuristic knowledge on lean and agile
manufacturing paradigms.

The text is well supported by a large number of self-test
questions with their answers. A unique feature of the book is
the inclusion of research avenues at the end of each chapter,
which enable the readers to carry out researches on these
paradigms.

This book is intended for the undergraduate and post-
graduate students of industrial, manufacturing, production
and mechanical engineering.

CONTENTS: Preface. Acknowledgements. List of Abbre-
viations and Expansions. Introduction. Lean Manufacturing
through Waste Elimination. Value Stream Mapping. SS
Concepts. Kaizen in Lean Manufacturing Paradigm. Single
Minute Exchange of Die. Pull Production through Kanban
Card System. One-Piece Flow Production System. Visual
Management. Lean Manufacturing through Total Productive
Maintenance. Implementation of Lean Manufacturing
Paradigm in Traditional and Moderate Organisations. The
Fundamental Structure of Agile Manufacturing Paradigm.
Agile Manufacturing through Management Driver. Agility
through Technology Driver. Agility through Manufacturing
Strategy Driver. Agility through Competitive Driver.
Implementation of Agile Manufacturing Paradigm in
Moderate and Smart Organisations. Conclusion. Appendix. Further Reading. Index.

Latest Print 2012 / 288 pp. / 16.0 x 24.1 cm
This comprehensive text on Quality Management provides ways and means of delivering efficient and effective production/services quality to utmost satisfaction of the customers.

Comprising 20 chapters, the book explains the concepts and techniques of quality management supported with related case studies. Numerical examples given in each chapter help students to understand the concept easily.

Primarily designed for MBA, ME/MTech (Industrial Engineering, Production Engineering), BE/BTech (Mechanical Engineering and Production Engineering) and MSc (Operations Research and Statistical Quality Control), the book also serves as a reference for professionals/consultants to carryout projects in quality domain for manufacturing or service organisations.

KEY FEATURES OF THE BOOK
- Detailed coverage of process and statistical quality control
- Chapters on ANOVA, orthogonal arrays and signal-to-noise ratio
- A chapter on Six Sigma including Shainin techniques
- A chapter on Analytical Hierarchy Process (AHP)
- Presentation of Design of Experiments (DOE) techniques

CONTENTS:

Latest Print 2014 / 432 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4943-8 / 395.00
BUSINESS AND MANAGEMENT

Production Management (Quality Management)

Simplified Six Sigma: Methodology, Tools and Implementation

N. GOPALAKRISHNAN
is the President of Projects India, Bangalore, a company specialising in training and implementation of lean manufacture and Six Sigma.

This compact and concise text, based on the rich and vast experience of the author gained while training thousands of individuals, explains in detail what Six Sigma is and why it is necessary to adapt the process. It explains the methodology, tools to be used, and the Six Sigma implementation process.

The book describes how to define a problem, how to measure the key inputs and outputs, and how to collect and analyse the data. It discusses the method of identifying the problems, solutions and, with this, to improve the problem process to get Six Sigma output on a continuous basis. The book gives details of how to impart training on the Six Sigma concepts, tools and implementation methodology to master black belts, black belts and green belts. It contains a detailed syllabus for the training, and the method of selecting the trainers.

This book should prove extremely useful to students of engineering and postgraduate students of business management. It will be handy for all those who wish to achieve highest quality outputs.

KEY FEATURES
• Illustrates all the tools to be used in each of the phases with ready to use templates using the MS Excel work sheets.
• Explains step-by-step the implementation process and how to record the results.
• Describes the data collection process and forms to be used for different types of data.
• Discusses how to control all the processes to ensure stability in the process.
• Contains a number of case studies to help both students and professionals.


Latest Print 2013 / 356 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4528-7 / ₹ 425.00

Total Quality Management

P.N. MUKHERJEE, Professor and Chairperson, Total Quality Management and Supply Chain Management, Narsee Monjee Institute of Management & Higher Studies (Deemed University), Mumbai.

This book presents a comprehensive view of concepts, principles and practices of Total Quality Management (TQM) from basics through advanced tools and techniques for practical implementation.

It is well known that ‘Total Organization Involvement’ in understanding and implementing TQM, along with the integrated business strategy, provided Japanese organizations with a strong platform for a meteoric rise to world-class performance and global leadership in every sphere of their operation. The success of TQM therefore depends a lot on the strong foundation and infrastructure of an organization. This is the crux of the author’s theory of ‘Holistic Management System for World-class Performance and Leadership’ expounded in this book. It is a TQM-based model that helps create a world-class management system for performance excellence and global leadership.

The concluding part of the book cites several examples of practical implementation of TQM principles and practices in various manufacturing and service sectors of the Indian industry, providing elaboration and analysis of each case study.

The book is aimed at undergraduate and postgraduate students of management as well as students of most engineering disciplines. It can also be used by the industries as a valuable guide to continuous improvement and practical implementation.

In a nutshell, the book provides wide coverage of areas related to TQM and integrates all its processes, tools and techniques under one management system to help businesses grow and excel. This is indeed the unique feature of the book.


Latest Print 2014 / 432 pp. / 17.8 × 23.5 cm
Quantitative Techniques for Decision Making, 4th ed.

R.B. KHANNA, Professor, Institute of Certified Management Accountants of India, Jaipur.

This thoroughly revised and well-received book, now in its Fourth Edition, continues to give an in-depth and incisive analysis of the various mathematical techniques required for managers in their decision-making process. The book provides a clear understanding of the practical utility of mathematical modelling and techniques, such as linear programming, integer programming, goal programming, dynamic programming, inventory models, decision theory, game theory, network analysis, queuing, simulation and Markov analysis, for solving real-life problems. The book lays emphasis on the practical applications of the techniques rather than their rigorous mathematical treatment. It also discusses probability and probability distributions—essential to tackling the everyday uncertainties of life.

The book is primarily intended as a textbook for undergraduate and postgraduate students of management, postgraduate students of commerce, students of Master of Financial Control course, and undergraduate students of industrial and production engineering. In addition, practising managers will also find the book immensely helpful in their day-to-day decision-making process.

NEW TO THIS EDITION
• A section describing the construction of activity on node (AON) networks for CPM and PERT networks has been included considering that most software designed for network analysis plot networks in this format.
• An appendix on ‘Mathematics for Managers’ which includes the topics of Matrix Algebra and Differential Calculus.
• New solved and unsolved problems.


L. SUGANTHI, Professor of Planning and Development, Anna University, Chennai.
ANAND A. SAMUEL, Pro-Vice Chancellor, VIT University, Vellore. A certified master trainer and a quality lead assessor (certified by BSI, UK), he has organized many training programmes for college teachers, and practicing engineers.

This comprehensive, student friendly book is intended as a tool to achieve quality in organizations. Completing a course based on topics covered in this book will make one confident enough to implement quality management principles in a given situation. A holistic approach, practical relevance, effective learning and a compendium of A to Z of TQM distinguish this well-written text. Inclusion of the findings of research carried out by the authors in industries and educational institutions add flavour to the book.

Various examples are drawn from institutional experience, which make the understanding of the concepts easy. The special feature of this book is that every chapter has a case study, in addition to a host of short questions and summary type questions. The questions for group discussion, practical exercises and net based exercises given at the end of every chapter are unique.

Intended primarily as a textbook for engineering and management students, this book would also be useful for the in-house training of engineers and managers of various industries and organizations on TQM. The book may be effectively used as a resource material for quality professionals and consultants.

Textbook of Fabric Science: Fundamentals to Finishing

SEEMA SEKHRI, Head, Department of Fabric and Apparel Science, Lady Irwin College, University of Delhi. A life member of Home Science Association of India, Textile Association of India and Fibre Forum of India.

This book is a small step in the direction of giving an Indian perspective in understanding the world of fabrics by explaining the factors that contribute to the aesthetics as well as performance of a textile product.

Organised in five parts, this book adopts a systematic approach in defining and exploring the concepts of fabric science. Part I (Fundamentals) discusses the history, composition, classification and properties of textile fibres. Part II (Fibre) focuses on the typical traits of the fibre family. Part III (Yarns) deals with yarn production and its properties. Part IV (Fabrics) covers weaving, knitting and other miscellaneous methods of fabric construction along with the emphasis on the type of fibres used in each case. Part V (Finishing) highlights the colouration and functional finishes of any fabric.

Intended for the undergraduate students of Home Science and Fabric and Apparel Science, the book will also cater to the various courses of fashion designing institutes.

KEY FEATURES

- Relevant illustrations and images to help in grasping the steps of fabric construction.
- Chapter-end exercises aimed at testing the factual knowledge, understanding and application of the concepts.
- Simple examples from everyday life to instil a sense of curiosity in the reader’s mind to know more about the intriguing world of textiles.

Quantitative Aptitude and Reasoning, 2nd ed.

R.V. PRAVEEN has wide experience of teaching quantitative aptitude and reasoning to the aspirants of civil services, bank PO, provident fund commissioner, staff selection commission (SSC) and other competitive examinations. He has been actively involved in guiding the candidates appearing for screening tests and interviews for the campus placements.

This well-received book, now in its second edition, is designed for the students preparing for the campus recruitment screening test and the undergraduate students for their course in Quantitative Aptitude and Reasoning. The main objective of this volume is to guide the students to solve the problems within the stipulated time and that too with the higher degree of accuracy.

Organized in two parts—Quantitative Aptitude (Part I) and Reasoning (Part II)—it helps students to apply basic mathematical and reasoning concepts to a range of quantitative and reasoning problems. The separate sections are devoted to verbal and nonverbal reasoning. It sharpens the ability to apply analytical and logical thinking while gathering and analysing information, designing and testing solutions to problems, and formulating plans.

This book is a valuable resource for conducting training programmes/workshops to train students in problem solving techniques in Mathematical Aptitude. It would equally be useful to the candidates appearing for quantitative aptitude and reasoning test conducted in various competitive examinations.

NEW TO THIS EDITION

- Numerous Aptitude questions (with explanatory answers) asked in recent placement tests and competitive exams
- New Chapters on
  - Simplification
  - Races and Games
  - Stocks and Shares
  - Discount
  - Logarithm
- Companion website www.phindia.com/praveen containing Interactive Exercises and Aptitude Tests

KEY FEATURES

- Short-cut methods to reach at quick solutions to problems
- Model Test Papers (with solutions) to instill confidence in the examinees
- Important formulae and notes to reinforce the understanding of the subject matter


Latest Print 2013 / 1028 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4777-9 / ₹ 495.00

eBook
Last Frontiers of the Mind: Challenges of the Digital Age

A. MOHANDAS MOSES
(Retd. IAS)

In this original and brilliantly written book, Mohandas Moses has embarked on a daring theme—the challenge of artificial intelligence to the human mind and human creativity.

To illustrate the central theme, the author has brought together the views of a galaxy of eminent philosophers, cognitive scientists and neuroscientists who have explored the phenomenon and evolution of the human mind and consciousness, and the growth of artificial intelligence. He has described the manner in which memory, language, creativity, mathematics, teaching-learning and chess-playing could be altered by the digital culture. He asks, should use allow our personas to be blue matched to the template of the machine mind?

This book will be of great interest as much to academics, experts on artificial intelligence, as to the general reader who wishes to know about the challenges to the human intellect and creativity in the digital age.


Latest Print 2007 / 440 pp. (Hard Cover) / 16.0 × 24.1 cm
This well-organized text continues to present the social-cultural anthropological concepts and theories which have influenced the mankind in the past, particularly in the twentieth century—between the years 1965 and 2000. The new edition is incorporated with two new sections—one defining the major concepts of sociology—defining society, community, association and so on, and the other an Appendix on Tribal Movement in India.

The book further provides an anthropological analysis of cultural institutions relating to society, economy, polity, folklore and art. The description of the relation between language and culture and a separate chapter on Cultural Change, make this text unique. Examples are taken from all across the world to describe socio-economic, political, and religious institutions, and give a panoramic view of the diverse cultures.

This book is intended to serve as a text for undergraduate students of Anthropology and postgraduate students of Anthropology and Sociology. In addition, it would also be beneficial for the students preparing for various competitive examinations.

KEY FEATURES

- Provides theoretical orientations in cultural anthropology.
- Contains annotated references at the end of each chapter. Gives an insight into the contributions of well-known anthropologists.
- Illustrates concepts through diagrams and charts, thus enhancing the value of the text.

CONTENTS:

Latest Print 2013 / 260 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4653-6 / ₹ 250.00

ROBERT DELIÈGE, Professor of Anthropology, University of Louvain-la-Neuve. He is a member of the Royal Academy of Belgium, and author of numerous books.

From the Greek Kings to the Indian Brahman Priests, the social behaviour and the continuity of human clans have always been a subject of erudition for the researchers; as the societies are evolving and so are our families!

This book, which is the English translation of original French version, unearths the origin, behaviour, and the physical, social, and cultural development of humans since the evolution of the society. It also discusses the Morgan’s theory of evolution and marriage along with the concepts of polygamy and matrifocalization. The book elaborates on some of the bizarre practices, such as Nair marriage practiced in South of India (Kerala), and suggests ways to reconsider the customs as per the modern norms.

The book also educates on the anthropological findings of Malinowski, Murdock, Levi-Strauss and Evans-Pitchard. Besides, it explains kinship as one of the most basic principles for organizing individuals into social groups, roles, categories, and genealogy.

This book is specifically intended for the undergraduate and postgraduate students of Anthropology and Social Sciences.

CONTENTS:

Latest Print 2011 / 192 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-4231-6 / ₹ 195.00

A.R.N. SRIVASTAVA, visiting faculty at Sam Higginbottom Institute of Agriculture, Technology and Sciences (SHIATS) Deemed University, Naini, Allahabad.
The emergence of recent discoveries of several hominid species in Africa. The text also gives up-to-date information on the australopithecine fossils found mainly in South and East through the study of the anatomical features of the Lineage Theory, and the Triple Lineage Theory—developed three theories—the Single Lineage Theory, the Double the subsequent developments of the hominids. It discusses The text focuses on the Miocene hominoids and their role in immunological and molecular analyses.

relationship between the large apes and man on the basis of behaviour of the nonhuman primates, and the phylogenetic primates, the morphology of the living primates, the social the theories of biological evolution, the origin of the primates, the morphology of the living primates, the social behaviour of the nonhuman primates, and the phylogenetic relationship between the large apes and man on the basis of immunological and molecular analyses.

The text focuses on the Miocene hominoids and their role in the subsequent developments of the hominids. It discusses three theories—the Single Lineage Theory, the Double Lineage Theory, and the Triple Lineage Theory—developed through the study of the anatomical features of the australopithecine fossils found mainly in South and East Africa. The text also gives up-to-date information on the recent discoveries of several hominid species.

The emergence of Homo erectus from one of the australopithecines, its cultural attainments, and the gradual transition to modern man are described in the text. The doubts about the phylogenetic lineage of the Neanderthals and the emergence of the early Homo sapiens in the context of human evolution form the basis of various theories regarding the evolution of modern man. These theories are thoroughly examined in the text.

This book is designed for undergraduate and postgraduate students of Anthropology and Archaeology. Besides, students appearing in competitive examinations will also find the book beneficial.


Since liberalization, Indian economy is going through some dynamic changes. From a primarily closed agrarian economy, India has become service-oriented open economy, becoming more and more susceptible to economic fluctuations.

This comprehensive book, in its third edition, continues to equip the readers with the necessary skills to assess and analyze the evolving economic scenario in India and world over. The new edition has been thoroughly revised and updated to incorporate the recent changes taking place in Indian and global economic environment. Every chapter is incorporated with a section on Understanding Economic Environment (UEE), in which the Indian economic environment is compared with the economic environment of its neighbouring countries, emerging markets and major players in the world economy.

All chapters are well-supported with illustrative examples and cases to provide an analytical insight to the topics. The chapters also include the topic Implications for Managers, in which implications of a particular aspect of an economy are summarized for the managers. Besides, for an easy assessment of the data, most of the quantitative information is presented in a graphical form rather than in the conventional tabular format.

Designed primarily as a textbook for the postgraduate students of management and commerce, this book is useful for the practising managers and policy makers as well.

KEY FEATURES
• Includes illustrations using latest data (upto 2011)
• Provides several numerical problems to strengthen the quantitative aspect of the subject
• Each chapter concludes with a Case Analysis to support the chapters with the applicative tools
• Companion website www.phindia.com/veenapailwar provides useful resources for the teachers as well as for the students and has been updated as per the current edition

Designed primarily as a text for undergraduate and postgraduate students of management and commerce, this comprehensive and well-organized book equips the readers with the knowledge to analyze the domestic and global business environment. The focus of the book is on the assessment of the evolving business scenario using analytical underpinnings and latest data.

This book clearly brings out the implications of changes in socio-economic and legal environment of business, and covers business environment by tracking changes in national income, inflation, fiscal deficit, money supply, exchange rate, balance of payment and many other economic variables. Besides, it briefs on legal aspects, deliberates on demographic changes and changes in technical and natural environment of business.

Besides students, practising managers and policy makers will also find the book as a useful reference.

**Companion Website:** This text is supported by the companion website: [www.phindia.com/veenapailwar-BE/](http://www.phindia.com/veenapailwar-BE/) containing useful resources for the teachers and study aids for the students.

**Instructors’ Resources:** To support the teaching efforts the website contains—Answers of the end of the chapter Numerical Problems with explanation, More than 1000 crisp, clear and colourful PowerPoint Slides and more than 1000 Multiple Choice Questions.

**Students’ Resources:** To strengthen the understanding of the students on the subject the website resources comprise—Interactive Multiple Choice Questions and hints for solving chapter-end Numerical Problems.

This book provides a comprehensive and coherent discussion of environmental economics. The text begins with an overview of the interdependence of economics and the environment. It then focuses on the theories and concepts from mainstream economics and describes how they are applied to environmental issues. The book discusses in detail the issues of market failure, externality and welfare with regard to the environment. It also analyzes population dynamics and its relationship with the environment. The concepts of natural resources economics, its nature and the issue of scarcity as an important part of environmental economics have been dealt with. Finally, the book presents important national and international environmental issues and legislations.

The book is specially designed for the undergraduate and postgraduate students of economics. The students of environmental science and engineering and management will also find the book quite useful.

KEY FEATURES
• Discusses various real-life environmental issues for better understanding of the theory.
• Provides a list of assignment topics to encourage the students to gain practical knowledge.
• Includes a glossary containing important terms.

CONTENTS:

Latest Print 2010 / 228 pp. / 16.0 × 24.1 cm

PHI Learning: Publications

Indian Models of Economy, Business and Management, 3rd ed.
P. KANAGASABAPATHI, Professor of management, presently working as the Director, Tamil Nadu Institute of Urban Studies, Coimbatore.

This comprehensive and extensively researched study deals primarily with the economic, business and management models from the Indian perspectives. The third edition of the book presents updated details, latest data and new information obtained from authentic sources in order to understand the topics discussed. It provides detailed information collected from field studies undertaken in different industrial and business centres across the country. The details contained in the book have been obtained from various empirical and research studies and reputed national and international sources. The author contends that India remained a strong economic, business and management power for most of the time in history, and the country has the potential to achieve the premier status even today. He gives masterly analysis of not only the Indian economic, business and management models, but also the popular economic, business and management models of the other countries. The author asserts that a paradigm shift in thinking is urgently needed to understand the ground realities and the functioning Indian systems, so that the country could be taken forward with the necessary orientation and suitable policies.

Intended primarily for the postgraduate students of Management, the book would also be useful to the students of Economics and Commerce, as well as to the professionals interested in the study of the Indian economy, business and management from the Indian perspectives.

KEY FEATURES
• A unique presentation of the Indian economic environment and its functioning models since the ancient periods.
• Comparative study of the Eastern and Western business models giving a holistic view of the subject.
• Historical development of the Indian management systems and the Western theories with details of contemporary management practices.
• Text reinforced with plenty of data to validate the concepts and a large number of examples and case studies to illustrate the concepts discussed.
• Updated with the latest data, recent developments and new information.

CONTENTS:

Latest Print 2012 / 352 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4563-8 / £ 275.00
**HUMANITIES AND SOCIAL SCIENCES**

**Economics (Industrial Economics)**

**Industrial Organization and Management**

S.K. BASU, Professor Emeritus at College of Engineering Pune (formerly known as Government College of Engineering).

K.C. SAHU, former Director of NITIE Bombay. He has also served as former Professor, VG School of Management and former Professor/Founder-Chair, Industrial Engineering and Management (IIT Kharagpur).

B. RAJIV, Associate Professor, Department of Production Engineering, College of Engineering, Pune.

This comprehensive text provides a glimpse of various theories and principles of management along with their applications in engineering industries. The authors have explained classical management, economic analysis, techno-economic life and various quantitative techniques associated with plant and facilities layout, behavioural studies, and human relations. Ergonomics and human factors in engineering have assumed a new dimension to design and manufacturing of products. The application of these principles, in relation to human effort and plant efficiency, has been discussed at length. It also discusses the biodynamic analyses of man-machine system in a stress-free environment.

This practice-oriented book, which contains a large number of worked-out examples, exercises and other pedagogic features, is intended for the undergraduate students of Industrial and Production Engineering. It can also be used as a reference by practising engineers.


Latest Print 2012 / 432 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4421-1 / ₹ 350.00

**Economics (International Economics)**

**International Economics**

M. MARIA JOHN KENNEDY, Associate Professor, Department of Economics, Arul Anandar College (Autonomous), Karumathur, Madurai, Tamil Nadu.

During the last few decades, the global economy has undergone rapid structural changes. With the increasing internationalisation of economic life, the study of International Economics becomes more complex due to the conjuncture of several economic, social, demographic and political factors operating both at the national and international spheres.

Organized in five parts, this book captures all the recent developments in International Trade Theory in a simple, concise manner. The book provides a thorough review and analysis of the international trade and business environment, and helps students to apply this knowledge to practical aspects of doing business in international markets. A rigorous approach is used to provide students with a good understanding of the complex nature of international trade and business activities. It emphasizes the economic, geographical, and political factors that make international business significantly different from domestic business activities.

The book is primarily intended as a textbook for undergraduate and post-graduate students of economics, commerce and management for their courses on international trade, foreign trade and international economics.


Latest Print 2014 / 344 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4986-5 / ₹ 325.00

**PHI Learning: Publications**
Macroeconomic theories were designed to cope up with the economic turmoil, such as Great Depression, so as to stabilize the economy. This book comprehensively explains the broad aggregates and their interactions such as national income and output, the unemployment rate, and price inflation, and sub-aggregates like total consumption and investment spending, and their components.

A prominent feature of this text is the use of simple algebraic expressions and formulations to reinforce analytical expositions of complex macroeconomic theories in students. The book also explicates how macroeconomic models and their forecasts can be utilized by both governments and large corporations to assist in the development and evaluation of economic policy. The chapters are incorporated with real-life examples giving practical insight on the subject.

Primarily intended for the undergraduate and postgraduate students of economics, this book can also be beneficial for the students opting for the courses in commerce.


Latest Print 2013 / 400 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4240-8 / 325.00

Macroeconomics, which along with microeconomics forms one of the two most general fields of economics, deals with the entire economy—national, regional and global economy. As macroeconomics encompasses the performance, structure, behaviour, and decision making of the whole economy, it impinges on the lives of all the people in a country and the world in general. This comprehensive and well-organized text strives to dwell on the multidimensional aspects of macroeconomics in such a fashion that the concepts are explained with great precision and clarity.

The authors, Dr. Ambar Ghosh and Dr. Chandana Ghosh, with their expertise and their wealth of experience in teaching the subject, try to strike a balance in treatment of the subject. That is to say, the text is neither too heavily mathematical nor entirely bereft of mathematics—indeed, it gives the right mix of mathematics and theory.

The book discusses in detail Keynesian economics, which focuses on aggregate demand to explain levels of unemployment and the business cycle, as well as New Keynesian economics which is based on rational expectations and efficient markets. Under these two broad categories, the book covers such topics as national income accounting, aggregate demand and determination of GDP, and the IS-LM model. Besides, the text analyzes the Classical Theory dealing with aggregate supply, money market; the complete Keynesian model; and the consumption and investment functions. The book clearly explains and rejects new Classical and new Keynesian theories. The book concludes with a critique and rejection of modern theories of growth and the implications of growth for the economy.

This book is intended mainly as a text for undergraduate and postgraduate students of Economics for their course in Macroeconomics. Besides, all those who wish to delve deeper into the complex yet fascinating subject of Macroeconomics should find reading the book useful and rewarding.


Latest Print 2014 / 436 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4306-1 / 395.00
The role of Managerial Economics has become all the more important today because of the increasingly competitive business world and the financial implications of many managerial decisions in such a scenario. This compact yet comprehensive book discusses the basic concepts and techniques of microeconomic analysis and their applications to managerial decision making with many useful and practical examples.

The text explains the basic concepts of the demand function and demand curve, the supply function and the supply curve, demand elasticities and their applications, techniques of demand estimation, and the theory of consumer behaviour. It also analyzes the theory of production, clarifies the nature of economic costs, and describes the profit maximizing tools of a business firm. Finally, the book describes standard pricing rules under different assumptions about the structure of the market in which the firm operates and examines certain pricing practices such as mark-up pricing and multiple products pricing.

KEY FEATURES

• Gives many Indian cases and Indian examples.
• Provides data analysis of certain firms and industries in India with respect to sales or demand forecasting through statistical tools.
• Gives multiple choice, analytical and applied questions at the end of each chapter.

Intended as a text for the postgraduate students of management, the book would be equally useful for the postgraduate students of Commerce and Economics. Besides, practising managers should find the book quite valuable.


Latest Print 2010 / 304 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4094-7 / 250.00

Managerial Economics, 3rd ed.
YOGESH MAHESHWARI
Professor of Finance with the Indian Institute of Management Indore.

For courses in managerial economics, this textbook, now in its third edition, is specifically designed for the students of management, commerce and economics to provide them with a thorough understanding of the economic concepts, methodologies and the economic environment influencing managerial decisions.

The book first lays a sound theoretical foundation of basic concepts, definitions, and methodologies of economics, being an essential prerequisite for students to understand the theory of managerial economics. All the basic principles are introduced with mathematical complexity kept to minimum—essentials of applied mathematics needed for comprehending the underlying ideas of models and theories of economics are covered.

The book then moves on to systematically enumerates the various tools of analysis such as demand analysis, cost analysis, elasticity of demand, production analysis and price theory, and highlights their importance in managerial decision making through the concept-example format, wherein a concept discussed is immediately followed by a practical situation so that the reader can understand its application. The end-of-chapter questions reinforce a deeper understanding of the concepts introduced in the text.

An exclusive chapter on linear programming emphasizes the importance of this mathematical tool in finding optimal business solutions. The book concludes with an exhaustive introduction to macroeconomics, analyzing in depth the concepts of inflation, income, savings and investments, and growth and employment in Indian context.

NEW TO THE THIRD EDITION

• Revised and expanded coverage of evolution of economic thought, and basic economic terms.
• An enriched inclusion of demand forecasting techniques, and the Cobb-Douglas production function.
• An extensive illustration of the commonly used pricing methods and market power.
• Value addition to the existing list of case studies to enhance students’ understanding of the theoretical concepts.


Latest Print 2014 / 368 pp. / 17.8 × 23.5 cm
This comprehensive text on Microeconomics provides complete understanding of the subject and is written in reader-friendly language. Each chapter introduces the major economic concepts with illustrative examples. The theories have been spelt out without the use of rigorous mathematics. The text is prepared strictly referring to the new all-India Syllabi. It contains both numerical and logical questions at the end of each chapter. Each chapter is followed by a list of major concepts and their brief elaboration—that will help the students to quickly review the main arguments.

The text is suited for courses in Microeconomics for graduate students of Economics and Management.
This book presents a scientific and systematic development of the underlying concepts of microeconomics, with due emphasis on analytical and mathematical treatment of the discipline, so that the students develop skills to apply these concepts, in the light of current developments, to real-world problems.

The book is organized into four units. The first unit is an introduction to the study of the science of economics. It defines the central problems of economics and outlines the tools to solve them. The students are introduced to the meaning and role of Production Possibility Curves to solve application-oriented problems in economics. The second unit gets students started on the study of microeconomics. It explains interaction of demand and supply curves and concept of equilibrium price. The factors affecting elasticity of demand and supply are discussed. This unit also looks at behaviour of consumers and explains several tools used to analyse demand. The third and fourth units elucidate the factors of production, the theory of costs and revenue, different forms of markets, and price-output determination in competitive markets.

Though the book is primarily intended for undergraduate and postgraduate students of economics and commerce, it would be immensely useful to management students as well.

KEY FEATURES

- Over 250 neatly drawn figures to clarify the concepts
- Chapter-end summaries as ‘Key Terms and Concepts’ to facilitate quick revision.
- Chapter-end short and long type questions of numerical and analytical nature with hints and answers as appropriate to probe the student’s understanding of the material covered.
- Numerous illustrative examples throughout the text to illustrate the application of concepts.
- Two case studies to encourage application orientation among the students.


Latest Print 2008 / 432 pp. / 17.8 × 23.5 cm

Microeconomics: Theory and Applications, Part I
S.P.S. CHAUHAN, Associate Professor in Economics, Department of Commerce, Delhi College of Arts and Commerce, University of Delhi.

Microeconomics: Theory and Applications, Part II
S.P.S. CHAUHAN, Associate Professor in Economics, Department of Commerce, Delhi College of Arts and Commerce, University of Delhi.

This book presents a scientific and systematic development of the underlying concepts of microeconomics with due emphasis on analytical and mathematical treatment, much needed for an application orientation of mind, to help students in understanding and tackling the real-world problems.

The book is organized into nine chapters. The first chapter is devoted to price-output decisions of a monopoly. It provides a comprehensive account of these decisions under all their manifestations in a systematic manner with illustrative sketches and mathematical explanations. Chapter 4 presents the sales maximization models of Baumol.

Chapter 5 is devoted to factor pricing and Chapter 6 to capital and investment decisions. The former focuses on pricing of variable and fixed factors of production while the latter on intertemporal analysis and choice under uncertainty.

Chapters 7 to 9, devoted to general equilibrium and market failure, analyse topics on general equilibrium and Pareto efficiency, markets with asymmetric information and externalities and public goods.

KEY FEATURES

- Over 145 neatly drawn figures to clarify the concepts.
- Chapter-end summaries as ‘key terms and concepts’ to facilitate quick revision.
- Over 410 chapter-end short and long answer questions of numerical and analytical nature with hints, and answers as appropriate to probe the student’s assimilation of the material covered.
- Numerous illustrative examples throughout the text to illustrate the application of concepts.


Latest Print 2009 / 288 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3715-2 / 250.00
Managerial Economics, 2nd ed.

E. NARAYANAN NADAR, Associate Professor and Head in the Postgraduate Department of Economics, V.H.N Senthikumara Nadar College, Virudhunagar, Tamil Nadu.

S. VIJAYAN, formerly Head, Department of Management Studies at V.H.N Senthikumara Nadar College, Virudhunagar, Tamil Nadu, is a well-known Management Consultant.

Managerial Economics has assumed a predominant role in today’s globalized and liberalized economy because of the financial implications of many decisions that a manager has to take in his day-to-day professional life. This comprehensive and student-friendly book, now in its second edition, strives to equip the young, practising and budding managers to find solutions to the real-world problems through the efficient and effective use of economic tools and techniques. The authors who admirably combine academic and professional experience give a clear and straightforward analysis of the various topics in managerial economics.

The text begins with an overview of managerial economics and describes the modern business firm and its objectives along with the concepts of market mechanism, demand theory and production analysis. The text then moves further to explain managerial techniques, macroeconomic theory and international trade and finance along with the risks and uncertainties involved in business. Besides, it also explains the cost and revenue, supply, pricing, profit and investment analyses. Finally, this book discusses some important Case Studies to reinforce the concepts presented in the text.

In this edition, a new section on eleventh five year plan (2007–2012) has been included in Chapter 15 to enhance the utility of the book.

Intended as a text for postgraduate students of Management, Commerce and Economics, the book would also be useful for undergraduate engineering courses where Managerial Economics is offered. Finally, the book can be profitably used by marketing and management consultants, business executives and other related professionals.


Latest Print 2013 / 332 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4616-1 / 295.00

PHI Learning: Publications
The young and adolescents are an epitome of change, hope and progress. The lives of adolescents are subject to global challenges faced by information and technological revolution, changing markets and globalization, and specific changes taking place in family dynamics, cultural traditions, religious beliefs and other socialization practices. This book on Adolescence Education assumes importance in view of the likely impact of acquired skills and behaviours during this period on an individual’s prospects in adulthood.

This book is an attempt to understand the broader context in which adolescent lives are embedded. The theoretical perspective presents a multi-disciplinary view of adolescence that helps to understand the evolution of the concept of adolescence. Presenting an elaborate account of adolescence as experienced by young in India and highlighting the challenges that emerge as a result of dynamic changes in society, the attempt is made to identify the emerging issues and concerns that impact the lives of adolescents and provide a perspective to adolescence education. The historical account presented helps to build an understanding of the various socio-cultural forces that led to the emergence of the existing Adolescence Education Programme (AEP).

The text presents the key features of the present AEP that are imperative for its successful implementation. The UN and civil society initiatives are mapped with a view to locate the characteristic features and thrust of various interventions. The text gives some gleaning insights from available evidences regarding execution of various existing adolescent programmes, and existential realities of adolescents’ lives.

The book is intended for the undergraduate and postgraduate students of Education, Psychology and Sociology. Besides, the book can be profitably used by in-service teachers, teacher educators, educational technology-resource personnel, and school administrators.


Use of technology has permeated all areas of knowledge, and Education is no exception. This accessible and easy-to-read book, emanating from an author who has distinguished himself as teacher and able administrator of education, and devised several educational and psychological tests, encompasses a broad spectrum of areas in educational technology. It focuses on the modern trends and innovations in Educational Technology to equip the teacher trainees and in-service teachers with the necessary skills in this area.

The book not only covers the objectives, concepts, use and management of Educational Technology, it also emphasises the role of education and various other techniques that help in teaching-learning.

This book is ideally suited for the students of B.Ed., M.Ed., BA/MA (Education) courses. Besides, the text can be profitably used by in-service teachers, teacher educators, educational technology-resource personnel, and school administrators.

Comprehensive Study of Education, A

S. SAMUEL RAVI is with the Department of Education, Immanuel Arasar College of Education, Tamil Nadu.

Intended for the undergraduate and postgraduate students of education, this book is an earnest endeavour to provide the readers with a thorough understanding of the various concepts of education. The exhaustive treatment of the topics in a cogent manner will enable the students to grasp the subject in an easy-to-understand manner.

Organized in seven units, the chapters encompass the different pedagogical features of education addressing some of the broad areas of concern, and upholding the intrinsic details of education in the emerging society. The various education commissions, their roles in spreading education in the present age and the remedies to correct their laws are also covered in great details.

This textbook can also be useful to the teachers and research scholars as a reference material.


Early Childhood Care and Education

M. SEN GUPTA, Professor and Principal, KIIT College of Education, Gurgaon.

Early Childhood Care and Education (ECCE) programme has gained importance today. Driven by socio-economic compulsions these days both parents seek jobs and remain away from the child for the whole day. Early Childhood Care centres provide them a safer alternative where their children can grow and develop in a stimulative environment. Therefore, ECCE has been comprehensively included in teacher training programmes at all levels. Designed as a text for the undergraduate students of education (B.Ed.) and elementary education (B.El.Ed.), it provides up-to-date and ready to use material. A complete section in the book is devoted to planning a pre-school or ECCE centre, organizing and managing it for its optimum utility and efficient functioning. The effort has been made to include the topics which will help students to understand the ECCE and its functioning in a straightforward and unconventional manner.

KEY FEATURES
• Written in a conversational style
• Comprehensive coverage with sample activities
• Numerous figures and illustrations for better understanding of the subject
• Integration of theory and practice
• Conceptual clarity and practical approach

The book would also be extremely useful to the nursery school teachers, teacher educators, parents, postgraduate students of education (M.Ed.) and for those who would like to run an ECCE centre as a good reference material.

HUMANITIES AND SOCIAL SCIENCES
Education (FUNDAMENTAL/GENERAL)

Educating Exceptional Children: An Introduction to Special Education

S.K. MANGAL, formerly, Principal, Professor and Head, Department of Postgraduate Studies at C.R. College of Education, Rohtak (Haryana).

Intended as a text for undergraduate, postgraduate (B.Ed./M.Ed., B.A., M.A. Education) and diploma level courses in Education as well as for courses in Special Education, this comprehensive and accessible book provides a sound base for understanding Special Children through an insightful and incisive analysis on Special Education.

The text dwells on exceptional children, or children with special needs, who are found to be in one extreme or the other and suffer from various deficits or disabilities or are gifted. They cover a wide spectrum—the mentally retarded, the visually and hearing impaired, the emotionally disturbed, those with autism, cerebral palsy, and the deprived, as well as the gifted and the creative.

This well-organized and pedagogically rich text should be extremely useful to students as well as professionals—special education teachers, those engaged in guidance and counselling, educational policy makers, and field workers, who have an abiding interest in the education of exceptional children and in special education.

KEY FEATURES
• Has student-friendly features like illustrations, examples, tables, and research-based experimental findings.
• Provides a complete picture of exceptionality, from the early years of human history to the present day.
• Gives case histories to practically illustrate the subject.


Learning and the Learner: Insights into the Processes of Learning and Teaching

N. SUKUMAR GOWDA, Founder-Director of Centre for Studies in Education, Puttur (D.K.), Karnataka since 1995. He is also engaged in educational activities such as inservice teacher training, student counselling and clinical service, and research and publication.

This book discusses the processes and problems of learning in the classroom conceptual framework of interactive triad of learner–curriculum–teacher. The purpose of the book is to help the educators develop newer insights into the nature and problems of the learner, and as a result, to enable them develop their own approaches to teaching so as to improve learning. The phenomenon and the process of learning has been looked at in a comprehensive and integrated manner in this book.

The author discusses the concept of learning by positing its meaning in the wider context of school curriculum and education. He attempts to answer the question 'how people learn' from the philosophical, physiological and psychological perspectives.

The concepts of intelligence and creativity, as related to learning, are discussed. The book describes in great detail the role of language in human communication, literacy development, and in reading and writing as modes of learning.

Pedology and pedagogy are the two major components of educational theory. The chapter on ‘Creative Pedagogy’ outlines the conceptual and practical interrelationship between learning and teaching. This chapter also outlines the different modes of teaching, and discusses the teacher’s role in fostering creativity and teaching children how to learn. Learning disabilities particularly those related to reading, spelling and computation are also presented.

Finally, the author envisions the future classrooms and strongly advocates liberated, creative, democratic, collaborative and humanistic classrooms. He recommends that Learning Resource Centres should be preferred to the traditional classrooms.

This book is intended to be a useful handbook for educators, researchers and students of education at all levels.


Latest Print 2010 / 256 pp. / 16.0 x 24.1 cm

Latest Print 2014 / 604 pp. / 17.8 x 23.5 cm

PHI Learning: Publications
Research Methodology in Behavioural Sciences

S.K. MANGAL, formerly Principal, Professor and Head of the Department of Postgraduate Studies, C.R. College of Education, Rohtak (Harayana), has been a distinguished teacher, administrator and researcher.

SHUBHIRA MANGAL, Dean, Professor and Head, School of Education, Lingaya’s University, Faridabad.

The quality and productivity of a research work very much depends on the competency of the researchers. Such competency needs to be generated and nurtured properly among the researchers from the very beginning of their research career. This comprehensive book on research methodology discusses in detail how to carry out research studies in various disciplines of behavioural sciences in an organized manner.

The book is meant for the postgraduate students of Education (M.Ed.), Sociology, Psychology and Management. In addition, it will also be useful to research scholars in learning the art of doing qualitative and quantitative research studies in behavioural sciences.


Latest Print 2013 / 752 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4808-0 / 525.00


RADHA MOHAN, Principal, Rajalakshmi College of Education, Chennai, Tamil Nadu.

Science teaching has recently evolved as a blend of conventional methods and modern aids owing to the changing needs and techniques of education. This updated Third Edition aims to strike this balance between modern teaching methods and time-tested theories.

All the existing chapters are suitably updated and new chapters on theories of learning, teaching models, and statistics are included in the text. Checklists are provided to help teachers handpick appropriate material from the vast available resources. The introductory chapter on statistics should help them interpret and analyze the test scores of their students.

THIS NEW EDITION FEATURES
- Four new chapters—Statistics for Science Teacher, Theories of Learning, Models of Teaching, and Constructivism in Science Education.
- Updated e-learning materials and website addresses relevant to science teaching and teachers.
- Completely revised chapters and elaborate coverage of all aspects of modern teaching.

This edition of Innovative Science Teaching is designed for the undergraduate and postgraduate students of education specializing in science teaching. It can also be used as reference by physical science teachers and teacher-trainees.


Latest Print 2013 / 456 pp. / 16.0 x 24.1 cm ISBN-978-81-203-3157-0 / 325.00
Teacher education is at the base of all educational systems. To make it effective, it is necessary to put in place an education system which equips the trainee teachers with the skills needed to enable their students to be successful. This book discusses how to train teachers, improve teacher education programmes and impart quality education.

The book is divided into eight parts. Part I takes a detailed look at the various stakeholders of teacher education. Part II focuses on microteaching, interaction analysis and practice teaching, which is a natural progression of the teacher trainee’s skill development. Part III addresses the issues and modalities of pre-service teacher education. Part IV concentrates on methods of teaching and techniques adopted. Part V covers the performance and evaluation of teacher education, with reference to the Indian context. Part VI discusses professional practice and ethics. Part VII highlights the importance of research as well as the use of action research in teacher education. Part VIII dwells on the current issues and trends in teacher education.

The book is meant for the postgraduate students of education (M.A., Education), B.Ed. and M.Ed. Besides, teacher educators, distance education personnel, school-based administrators and policymakers will also find the book quite useful.

Teaching of Social Studies

S.K. MANGAL, formerly Principal, and Professor and Head, Department of Post Graduate Studies at C.R. College of Education, Rohtak, Haryana.

UMA MANGAL, formerly Principal, Vaish College of Education, Rohtak, Haryana.

Written in a simple and engaging style, this text is ideally suited to the needs of B.Ed. and M.A. (Education) students. Besides, it can also be profitably used for the in-service teacher education programmes organized by the Central and State Education Boards.

This comprehensive book provides what is needed by the social studies teacher for the teaching of the subject. It imparts the desired knowledge and skills related to the formulation of instructional objectives, methodology of teaching, use of instructional material, organization of the social studies room, and utilization of the resources of the community and co-curricular activities. It also equips the teacher with the knowledge and application of the innovations in the field of social studies teaching such as team teaching, micro-teaching, and individualized instruction through programmed learning. Moreover, the text elaborately deals with the pedagogical analysis of the content material, unit planning and lesson planning, evaluation devices, diagnostic testing, and remedial teaching.

**KEY FEATURES**

- Discusses various topics with the help of a number of figures and tables to facilitate better understanding of the subject matter.
- Gives Summary at the end of each chapter to help readers review key concepts.
- Provides chapter-end Study Questions to reinforce students' understanding of the concepts.


A frequent use of scientific and technical methodologies has revolutionized various fields of education, and science education is not an exception. This book elaborates on various important aspects of science education, and comprehensively deals with its objectives and applications in the classroom programmes.

The purpose of this book is to help the trainee teachers learn the nitty-gritty of science teaching, and instill in them the teaching skills and inquiry-based teaching methodologies, so that they can apply these skills practically. Divided into six units comprising 23 chapters, the book discusses step-by-step methodologies of teaching science and the ways and means of preparing the lesson plans. The chapter on Teaching aids provides useful tips on using teaching aids to make the teaching-learning process more interactive.

The book is intended for the undergraduate students of Education and can also be used as a reference book for the Science teachers.

**KEY FEATURES**

- Defines the objectives of science teaching as per the National Curriculum Framework (NCF) 2005, and simultaneously provides an exposure to other latest policy perspectives.
- Provides up-to-date information on new evaluation system of CCE and grading for Class X introduced by the CBSE board in the year 2010.
- Guides the trainee-teachers in constructing practical Test Paper, Viva Questions and Multiple Choice Questions as per the latest CBSE guidelines.

Amitav Ghosh occupies an important place among Indian English writers and is much acclaimed for his literary style and content.

One of the most prolific postcolonial writers writing today, Amitav Ghosh has received many awards: The Circle of Reason, winning the Prix Medici Etranger (one of France’s top literary award), The Shadow Lines, winning the Sahitya Akademi Award, and The Calcutta Chromosome, bagging the Arthur C. Clarke Award for 1997. His latest novel, Sea of Poppies too has been highly appreciated.

This book, which is an anthology of critical essays, deals with fictional as well as non-fictional works of Amitav Ghosh. It focuses on Ghosh’s idea and theory of the novel, postcolonial rationality in The Circle of Reason, nationalism in the context of Partition in The Shadow Lines, and East-West encounter in The Calcutta Chromosome. Besides, it also discusses power structure operating within the narrative of The Glass Palace, and the question of space, identity and cultural difference in The Hungry Tide. Though different from each other, some of the essays take up common themes for discussion and offer new insights into Ghosh’s works. The essays are thoughtful, incisive and refreshing.

This book is meant for the undergraduate and postgraduate students of English literature. Besides, all those readers who wish to delve deeper into the works of Amitav Ghosh will find reading the text extremely informative, stimulating and useful.


Latest Print 2009 / 208 pp. / 13.9 × 21.6 cm
ISBN-978-81-203-3865-4 / 150.00

PHI Learning: Publications
Among all the genres of literature, the novel has always held a fascination for the readers over the centuries. Rightly so, because it tells a story in a gripping and dramatic style, which often reminds them of their lives, sometimes transporting them into an imaginary world of entertainment and escape, and enabling them to forget their worries and concerns.

The 19th century England was prodigious for the production of novels with such luminaries as William Makepeace Thackeray, Charles Dickens, the famous Bronte sisters—Charlotte Bronte, Anne Bronte and Emily Bronte—George Eliot and Thomas Hardy adorning the horizon. Among these, Dickens certainly holds a pride of place: his prodigious writings, predominantly novels, and his inimitable style bear testimony to this.

The child figure is ubiquitous in all his novels—from Oliver Twist, Dombey and Son to Hard Times and Great Expectations. The child is sometimes the victim and sometimes the reminder of the innocence lost in a materialistic world. Great Expectations is a fascinating novel told with remarkable drama, humour and irony. It is a gripping story, the story of Pip, the orphan boy adopted by Mr. Joe Gragery, a blacksmith. Pip has both good luck and great expectations; but then he loses both. Through his rise and fall, Pip learns how to find happiness and, in the process, falls in love. Pip is neither a hero nor an antihero. He is just an ordinary human being who experiences myriad emotions—fright, love, grief, misery and happiness. As in his other novels, Dickens draws memorable and haunting characters in this novel, too, and also exposes the rampant corruption prevalent during the period.

Besides a comprehensive Preface by the Editor, the book gives the actual text, followed by specially written critical essays on the novel by experts in the field, each offering insights on different aspects of narrative, themes and culture. Undergraduate and postgraduate students of English Literature as well as researchers in the field should find this book extremely useful and immensely readable.


Latest Print 2009 / 468 pp. / 13.9 × 21.6 cm
Indian Drama in English

Editor
KAUSTAV CHAKRABORTY, Assistant Professor, Department of English, Southfield (formerly Loreto) College, Darjeeling, West Bengal.

This edited volume on Indian Drama in English, including Indian plays in English translation, with contributions from experts specializing on the different playwrights, covers the works of major dramatists who have given a distinctive shape to this enormous mass of creative material.

This comprehensive and well-researched text explores the major Indian playwrights in English. It encompasses such works as Rabindranath Tagore’s Red Oleanders; Vijay Tendulkar’s The Vultures: The Court is in Session, Kanuqadun, The Vultures, and Kamala; Girish Karnad’s Hayavadana, Tughlaq, Naqa Mandala, and The Fire and the Rain; Mahasweta Devi’s The Mother of 1084; Mahesh Dattani’s Final Solutions, Tara, Dance Like a Man, and Bravely Fought the Queen; Habib Tanvir’s Charandas Chor; Indira Parthasarathy’s Auranzab; and Badal Sircar’s Evam Indrajit. The book focuses on different aspects of their plays and shows how the Indian Drama in English, while maintaining its relation with the tradition, has made bold innovations and fruitful experiments in terms of both thematic and technical excellence.

The book is intended for the undergraduate and postgraduate students of English literature. Besides, it will also be valuable for those who wish to delve deeper into the plays covered and analyzed in the text.

CONTENTS:
Preface. Contributors. Introduction: Representative Playwrights of Indian Drama—KAUSTAV CHAKRABORTY. Tagore’s Red Oleanders: A Thematic Study—ANANDA LAL. Translation of Symbols and Other Tropes and Schemes in Red Oleanders—BASUDEB CHAKRABORTY. The Outsider’s Vision: Samant in Silence! The Court is in Session—AMIT SEN. De-Silencing the Silence: Legal Institutionalization of a Woman’s Victimization—SHIVITA AAMIR KHAN. “Wound that’s born to bleed”: Critiquing Women’s Position in Indian Society through Vijay Tendulkar’s Silence! The Court is in Session—TANINDRA GUHA. Vijay Tendulkar’s Kanuqadun: Negotiating Social Truth(s)—JOYDEEP BHATTACHARYYA. Vijay Tendulkar’s The Vultures (Gidhade): A Study in Violence—ROY CHAMLING. Vijay Tendulkar’s The Vultures: An Interface between Feminist Critique and Existential Angst—SHIBHORI RAY. Panopticons of Power: The Infusion of Family, Gender and Social Opportunism in Vijay Tendulkar’s Kamala—RAJU NANDI. Girish Karnad’s Hayavadana Revisited—FR. K.L. GEORGE. Hayavadana: A Theatre-goer’s Response—DATTAREYA DATTA. Casteism and Karnad’s Hayavadana—KAUSTAV CHAKRABORTY.

Indian poetry in English began with the imitation of English Romantic poets but gradually Indo-Anglian poets began to write on Indian themes based on Indian contexts and Indian social scenario. Indo-Anglian poetry has received world recognition and some of the poets are held in high esteem. This anthology containing 35 essays is an attempt to represent the gamut of Indian poetry in English, both pre-Independence and post-Independence, from diverse critical perspectives. The thirteen poets covered in this anthology include Michael Madhusudan Dutt, Toru Dutt, Rabindranath Tagore, Sarojini Naidu, Nissim Ezekiel, A.K. Ramanujan, and Kamala Das.

The essays in the book offer innovative perspectives and touch upon different aspects of Indian poetry in English. The tone of the essays varies from personal to argumentative to objectively discursive.

The book, with diverse and thought-provoking essays, will be highly useful for undergraduate and postgraduate students of English Literature. Besides, those who are interested to know about Indian Poetry in English will find the book quite illuminating and interesting.


Latest Print 2012 / 472 pp. / 13.9 x 21.6 cm
This concise book deals with Anand’s three early novels—Coolie, Untouchable, and Two Leaves and a Bud—and a few short stories, which were conceived, written and published during the colonial period—the Raj. It also includes critical essays on such themes as Life and Art, Themes and Applications, Anand and His Use of Language and a study on the Women in Anand’s Short Stories.

Dr. Ketaki Goswami, with her erudition and scholarship and research findings on Mulk Raj Anand’s works, brings out the quintessential Anand—the messiah of the downtrodden, the unwanted and the unloved. For, Anand intricately weaves through his novels, the theme of exploitation and the apathy, the indifference and the condescending attitude of the affluent towards the marginalized sections of the society whose pangs and pains wrenched his heart. Anand’s life-long quest was to show love and compassion to the poor as also to alleviate their pains and give a magic touch to the downtrodden to make their lives bearable. In all the three novels and the short stories discussed in the book, the author shows that the novelist believed that the Summum bonum of a human being is living a life with dignity which has been denied to the lower castes and the outcasts—the lower dregs of humanity—because of the repulsive attitude of the rich. Being a humanist of the highest order, Anand concerns himself with the whole man, his development, sense of dignity and decency in living.

This book should be extremely useful and invaluable to the students of English Literature who opt for the paper on Indian Writing in English. The academic community also will find reading the book highly interesting, stimulating and ennobling.


Latest Print 2009 / 96 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3763-3 / 95.00

R.K. Narayan is one of the best Indian English novelists whose works have been under public scanner for long. His contribution to Indian English writing is huge. The quintessence of his narrative art lies in metamorphosing the mundane into something extraordinary. This edited volume presents numerous useful essays written by various persons eminent in the field. It includes important Malgudi novels and short stories. All these works bring out Narayan’s viewpoint regarding the psyche of the educated section of the Indian populace and present an interesting case study. Besides, the essays deal with the subjects of utmost importance to the student.

The text is primarily intended for both undergraduate and postgraduate level students of English Literature.


Latest Print 2012 / 260 pp. / 16.0 × 24.1 cm
Women’s Writings in the Nineteenth and Twentieth Centuries—Short Stories

TAISHA ABRAHAM, Associate Professor, Department of English, Jesus and Mary College, New Delhi.

Intended as a text for undergraduate students of English for their course on Women’s Writings in the Nineteenth and Twentieth centuries, this compact and well-organized book provides both the history of the development of the short story in America and Britain and a comprehensive introduction to the modes on critical practices based on feminist thinking. It takes into account the strategies used by the women writers of the period in the backdrop of the gender issues that agitated their minds.

The text is divided into three parts—Part I: Introduction—containing two chapters that deal with the development of the American short story and the resurgence of radical feminism in America. These provide the historical and the feminist frame within which the short stories by the Anglo American Women’s Writers should be read. Part II gives four short stories: Kate Chopin—The Story of An Hour; Charlotte Perkins Gilman—The Yellow Wallpaper; Willa Cather—Coming, Aphrodite!; and Katherine Mansfield—Bliss. Each short story is preceded by a critical introduction, detailed references for further reading, and a biographical time line. Part III comprises three critical essays which provide sharp insights into the period in which the four women writers were writing.

This book will be treasured not only by students but also by those who wish to study critically the feminist writings of the period. In addition, it will enrich readers’ understanding of American and British literary history and culture.

SALIENT FEATURES
- The critical introduction to each short story traces the development of the form from its origins, both historically and in terms of female literary contributions to its development.
- The chapter on Radical Feminism is mapped in the context of social, political and cultural development.
- The book provides historical, literary and biographical contexts of the writers and their short stories.


Applied geography, a new frontier in geographic discipline, distinguishes itself from other branches of geography through the application of geographical knowledge and its techniques in solving practical problems of the land and the environment.

Explorations in Applied Geography is a felicitation volume in honour of Professor L.R. Singh, Department of Geography, University of Allahabad, who has established his international credentials as a leading exponent of Applied Geography. He considers public policy to be one of the applications of applied geographic principles, since many problems facing society today have a geographical dimension. To Professor L.R. Singh, Applied Geography is the strategy of the trinity of men, space and resources which need to be harmonized in advancing human well-being.

This volume, contributed by geographers of eminence within the country and from other parts of the globe, focuses on the following thrust areas:

• Natural and environmental hazards
• Environmental change and management
• Challenges of the human environment
• Application of techniques of spatial analysis

In a nutshell, the book emphasizes the important proactive role that the Applied Geography must play in the formulation of public policies and programmes for sustainable human development.

This comprehensive and classic compendium will not only be useful to postgraduate students in geography but also provide new vistas in geographic research.


Latest Print 2008 / 540 pp. (Hard Cover) 16.0 × 24.1 cm ISBN-978-81-203-3384-0 / 495.00
Geology is the science of earth’s crust (lithosphere) consisting of rocks and soils. While mining and mineralogical engineers are more interested in rocks, their petrology (formation) and mineralogy, civil engineers are equally interested in soils and rocks, in their formations, and also in their properties for civil engineering design and construction. This book is so written that the subject can easily be taught by a civil engineering faculty member specialised in soil mechanics.

Dexterously organized into four parts, this book in Part I (Chapters 1 to 11) deals with the formation of rocks and soils. The classification of soils, lake deposits, coastal deposits, wind deposits along with marshes and bogs are described in Part II (Chapters 12 to 20). As the book advances, it deals with the civil engineering problems connected with soils and rocks such as landslides, rock slides, mud flow, earthquakes, tsunami and other natural phenomena in Part III (Chapters 21 to 24). Finally, in Part IV (Chapters 25 to 30), this text discusses the allied subjects like the origin and nature of cyclones, rock mass classification and soil formation.

Designed to serve as a textbook for the undergraduate students of civil engineering, this book is equally useful for the practising civil engineers.

R.D. DIKSHIT, Professor of Geography, M.D. University, Rohtak.

With contribution from world renowned geographers, this edited book is on the spirit and purpose of geography, on the fundamental concepts, philosophy and methodology of geography—as a discipline. It introduces the reader to the essence of modern geography in a jargon-free and easy-to-read style.

The book is appropriate for senior/graduate level courses in geographical thought. Each chapter is authored by a distinguished professional. The student is spared the effort of going through a large number of journals, textbooks and research works as the selection of appropriate articles authored by eminent geographers are included in the text. To help easy assimilation, each chapter is prefaced by an editorial note summarizing the essence of the chapter.

CONTENTS:

Latest Print 2012 / 204 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-0876-3 / ₹ 150.00

SHANKER M. MATHUR, formerly Director, Geological Survey of India.

Aimed at B.Sc. students of geology, this introductory text develops a basic understanding of the Earth as a complex, evolving system of geological processes. This book will also be of immense use to those postgraduate students of geology who opt for this stream after graduating in disciplines other than geology.

Geology as a science has recently gained increasing importance because of the current developments in oil and mineral exploration and also because of recent occurrences of earthquakes and tsunamis.

This book covers the entire spectrum of the geologic concepts and relates them to the main processes of geomorphology, earthquakes and volcanoes. Important types of the three categories of rocks—igneous, sedimentary and metamorphic—that form the crust of the Earth are described with their characteristic mineralogy. Major structures that are born of tectonic activities are discussed. Palaeontological descriptions cover not only the plant and animal groups but also other evidences of life in the geological record and evolution. An important feature of the text is that modern stratigraphic methods of classification are outlined clearly, and the latest geologic time scale with numerical ages as approved in 2004 by the International Commission on Stratigraphy of the International Union of Geological Sciences is incorporated.


Latest Print 2013 / 164 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3515-8 / ₹ 150.00
Geographical Thought: A Contextual History of Ideas

R.D. DIKSHIT, Professor of Geography, M.D. University, Rohtak.

This book charts out the history of geographical thought from the early times to the present in a single compact volume. With the focus on the modern period beginning with Humboldt and Ritter, specific emphasis is given on presenting developments over the past half century. The different conceptual/methodological changes in the post-1945 period (including quantitative, behavioural, humanistic and social relevance revolutions), and the current changeover to post-modern perspectives are dealt with thoroughly. The text, therefore, fulfils the requirement of courses in geographical thought at both the undergraduate and postgraduate levels.

CONTENTS:

Latest Print 2014 / 312 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-1182-4 / ₹250.00


A.M. PATWARDHAN, has been Professor of Geology and the Head of both the Department of Geology and the Department of Environmental Science, University of Pune. He has also been the Director, Interdisciplinary School (Science), University of Pune.

Addressed to students pursuing studies in the broad interdisciplinary field of Earth Science, this Third Edition provides an insight into the Earth’s unique internal physical state and the compositions of its geospheres. The highly complicated dynamic mechanism of Plate Tectonics, the geochemical exchange of matter between the core, mantle and the crust as also between the hydrosphere-atmosphere-biosphere, resulting in the formation of the crustal rocks and mineral deposits, have all been written in a comprehensible manner so that even a beginner in Earth Science can easily understand these phenomena. While outlining the geological and radiometric methods of measuring the ‘Geological Time’ and characterizing the surface and subsurface geological record in terms of rock formations, fossils, mineral deposits, oil, gas and water resources, the book interconnects the magmatic, metamorphic and sedimentary processes within a ‘System’ driven by the Earth’s internal heat and the radiations received from the Sun. There is a full chapter addressing the major present-day concerns regarding the causes of natural disasters and environmental threats.

Additional examples and illustrations in this edition should make its reading even more fruitful and enriching.

CONTENTS:

Latest Print 2012 / 544 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4655-0 / ₹450.00
Introduction to Ore Microscopy

JAYA PRAKASH SHRIVASTAVA, Senior Professor of Geology, University of Delhi.
NISHI RANI, Research Associate in the Department of Geology, University of Delhi.

Introduction to Ore Microscopy is a brief introduction to the science of Ore Minerals. It is designed to help undergraduate and postgraduate students of Geology and Earth Science for their practical course. The book gives a comprehensive, handy and scientific description of ores which form a part of Ore Geology and Economic Geology. Illustrated with a wealth of full-colour and black-and-white polished section photographs, the book explains how to observe ores under the microscope in the reflected light. Besides dealing with the texture, structures, and paragenesis of ore minerals, it also deals with the methodology to study physical and optical characters of important ore minerals, such as Sulphides, Arsenides, Antimonides, Molybdenites, Tungstate, and Oxides ores. A brief description mineral paragenesis, paragenetic diagrams, and some important ore-deposits of India and other parts of the world are also given.

The book will also prove to be useful for those working in the mineral industry.


Latest Print 2012 / 112 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4665-9 / ₹ 150.00

Fossils in Earth Sciences

ANIS KUMAR RAY, has been a faculty of the Department of Geology, Presidency College, Kolkata.

This compact and reader-friendly book introduces students to materials and studies that are gaining importance in the study of fossils. It covers all the important branches of palaeontology and provides up-to-date and detailed analysis of the principles of palaeontology, systematics, palaeoecology, evolution, invertebrate and vertebrate palaeontology, palaeobotany, and micropalaeontology. The text takes a holistic approach to the subject with concrete examples.

Primarily intended for undergraduate and postgraduate students of Geology or Earth Sciences, the book will also prove useful for Zoology and Botany undergraduates. Geologists, particularly those assigned with jobs on palaeontology, micro-palaeontology, palaeobotany will benefit from the text. Finally, students and research scientists intending to work with Indian problems concerning palaeontology should find the book beneficial.

KEY FEATURES
• Provides up-to-date data, concepts and Indian examples of fossils
• Furnishes important data for laboratory work and Indian stratigraphy
• Gives pertinent information on Fossil Lagerstätten in a tabulated form


Latest Print 2014 / 444 pp. / 17.8 x 23.5 cm
Managing Natural Resources: Focus on Land and Water

H.N. MISRA, Emeritus Professor of Geography in the University of Allahabad. Currently he is President of the National Association of Geographers, India (NAGI).

Natural resource management and sustainable development have, of late, assumed great importance, especially because of ecological crisis and environmental dangers which are looming large. Today the issues related to natural resource exploitation, consequences, their conservation, preservation and management leading to sustainable development have become the major thrust areas of teaching and research. Also, sustainability of natural resources, especially water and land resources, and their efficient use is one of the core programmes of Government of India’s Twelfth Five Year Plan (2012–2017) for strategic development; this objective can only be achieved if the resources are used judiciously.

Although land and water resources—the focus of the present book—are vital for human survival and development, unfortunately both are under threat and are increasing strain worldwide. These resources have wide and significantly varying implications in rural and urban settlements, especially in India, where population has been continuously growing and, therefore, the demand of land and water has been intensifying. This has necessitated urgent need for reviewing the availability of land and water resources and their conservation.

Besides dealing with the theoretical aspects, this compendium presents case studies on natural resources as well, which reveal ground realities at micro and meso levels too. Pedagogical features like maps, diagrams, satellite imageries and latest database of the primary and secondary nature distinguish this book from other works on the subject.

The book will be of immense use to postgraduate students and research scholars of geography and related disciplines such as rural–urban studies and environmental science. The thematic approach of the book provides reasonably good contents for cogitation to researchers. Policy makers, planners and academicians may also be benefitted while framing futuristic norms which may lead to sustainable development—the ultimate goal.

Companion to Communication Skills in English, A: A Practical Approach to Improving Pronunciation (with CD-ROM)

JITENDRA KUMAR MISHRA is with the Faculty of Science and Technology, ICFAI University, Tripura.

This is an excellent handbook as well as a guide for learning, practising, improving and developing the skills necessary for English pronunciation. Divided into two Parts, the book in Part I—Sound System in English—explains how to pronounce vowel and consonant sounds correctly so that there is least confusion in the listener’s mind. Part II—Accent Patterns in English—describes word and sentence stress and suggests the most common and important tips for proper and correct pronunciation.

The lessons provided in this book are simple and easy to practise and can serve as an instructional manual and ideal practice material in the language laboratories.

KEY FEATURES
• Gives well-planned lessons to practise IPA sounds.
• Provides a large number of lessons for practice.
• Contains an audio CD which will help the students practise pronouncing the words correctly.

This accessible and highly practical book is intended for the undergraduate students of different streams. It can also be of considerable help to plus two level students to improve and develop their pronunciation. Besides, professionals working in different fields should find this book extremely useful in their real-world scenario.

An Expert Comment:

We Indians have our own problem of speaking English with the influence of our mother tongue. Can this be changed? I think not! Therefore, what is important is when an English word is spoken, it should be pronounced in a manner that can be understood correctly by the listener. That is what Mr. Jitendra has so successfully done in this book. I am happy to commend this book to all the readers.

—DR. R.K. PATNAIK
Former Vice Chancellor, The ICFAI University, Tripura


Course in English Communication, A: For the Learners of English as a Second Language

MADHAVI APTE, Director, MGM’s Institute of Indian and Foreign Languages and Communication and Professor, MGM’s Institute of Management, Aurangabad, Maharashtra.

With the increasing awareness of the importance of English as a global link language and the widespread use of the Internet and the globalization of business and education, the need for learning English effectively is being felt more than ever before. This international awakening has spurred nations like China and Russia that kept away from English in the past to educate their populations in the English language. In India too, there is a renewed interest in learning English for communication. This book takes the most pragmatic and current approach to the teaching and learning of English which offers learners ready-to-use expressions in their day-to-day communication.

The book offers conversations in various social contexts, in formal and informal situations, and lists in an exhaustive way all the expressions used within the particular communicative function. In addition, there are exercises at the end of each unit which provide the learners an opportunity to go through the actual use of those expressions, thereby enhancing their confidence to use English.

Designed primarily as a text in communicative or functional English, this book should also be useful to all those who wish to improve their English for socially appropriate communication.


PHI Learning: Publications
Today, more than ever before, there is a realization that communicating properly, especially in writing, is essential for all the job aspirants as well as those employees—budding managers and others—eager to build up their career. Taking this scenario into account, this book equips the reader with the ability to learn and enhance the writing skills in English.

From fundamentals of grammar to precis, paragraph and essay writing, this book dwells on all aspects of the language besides listing the words (both new and old) to enhance one’s word power, and the foreign words used in the English language.

Divided into eight sections, the book describes eight effective tools to master the art of writing. The book begins with the basics of writing, and it then goes to give a careful analysis of functional grammar, vocabulary, common errors committed and their rectifications. Finally, the book showcases the intricacies of formal and informal writings and creative writing to make a learner proficient in these areas. Each section is supported with simple examples, and easy-to-perform Practice Exercises along with their answers.

The book is intended for the undergraduate students (both regular and correspondence courses) of all universities, and higher secondary (plus 2) students of all boards. The book will also be beneficial for the students appearing for the competitive examinations and interviews as well as for the general reader who wishes to improve his/her English writing skills.


Latest Print 2013 / 384 pp. / 16.0 × 24.1 cm
J.K. GANGAL, Director of the Centre for Creativity and Human Resource Development (CCHRD), Delhi, is a well-known ELT expert.

A sequel to the author’s well received book A Practical Course in Spoken English, this comprehensive yet compact book provides a practical course for enhancing one’s English speaking skills. Divided into six parts and 44 chapters, the book in Part I—The Knowledge Paradigm: The What and Why of Effective Speaking—discusses, among others, about phonetics and phonology, the phonemes, and stress and intonation. Part II—The Skill Paradigm A—Public Speaking Skills—covers such areas as using the 4Rs for effective speaking, combating stage fear, using audio-visual aids, and non-verbal communication. Part III—The Skill Paradigm B—Communicating with People—deals with such topics as making effective telephone calls, celebrating teacher’s day, expressing gratitude, participating in group discussions, and participating in TV/radio debate. Part IV—Further Strengthening Your Communication Skills—is devoted to a study of rein-forcing the reader’s vocabulary through such means as using phrasal verbs, linking words, consulting the Ready Reference Wordbook, and frequently used foreign words and phrases.

The final two parts—Part V, The Desire to Achieve: Getting Motivated, and Part VI, Effective English Speaking Skills in Action—provide the meaning and techniques of self-motivation, evaluating daily progress, besides giving some memorable speeches delivered by great speakers like Pandit Jawaharlal Nehru, US Presidents Kennedy and Lincoln, and the civil rights activist, Martin Luther King.

The book, written in an accessible and student-friendly manner, is meant for anyone who possesses a fair amount of English speaking skills but wishes to further enhance those skills. Undergraduate students of different disciplines and even plus two students should find the book quite useful and interesting. As acquiring communication skills is a must in today’s extremely competitive world, this book would do wonders to the student as well as the lay reader.
HUMANITIES AND SOCIAL SCIENCES

Current English Grammar and Usage

S.M. GUPTA, Emeritus Professor of English at Sobhasaria Group of Institutions, Sikar, Rajasthan.

In the present age of Information and Communication Technology (ICT) revolution and social networking scenario, fast and precise communication has become the need of the hour. But in the whirlwind of efficiency, accuracy cannot be sacrificed. Sometimes, adequate attention is not paid to the use of grammar and usage, which leaves a very bad impression on the readers. This book on English grammar presents the topics in an innovative way and meets the long-felt need of a good user-friendly grammar book.

The book makes the study of grammar very interesting, challenging and exciting. It discusses grammatical categories, processes and principles of sentence construction in a very simple and lucid manner. The book starts with the discussion of word classes and goes on to describe phrases and sentences. More importantly, it deals with the problem areas of tenses, modal verbs, articles, determiners, prepositions, passive constructions and direct and indirect narration in a novel way. The composition section of the book includes a very useful presentation of letter-writing, precis-writing, report writing, reading comprehension and, above all, the use of vocabulary. The Appendices on how to avoid spelling errors and a complete list of the types of sentences are very useful.

This comprehensive and well-researched book should prove very valuable for undergraduate students of all streams. Besides, professionals, those preparing for competitive examinations and even any lay reader who wishes to possess the essentials of English grammar and usage will find the book useful and interesting.

**KEY FEATURES**
- Explains difficult grammatical concepts in a simple and lucid language.
- Provides models for every writing activity.
- Incorporates latest linguistic research in the conceptualization and presentation of the grammatical material.
- Contains lots of exercises with solutions.


Latest Print 2013 / 488 pp. / 16.0 × 24.1 cm

Feature Writing, 2nd ed.

N. MEERA RAGHAVENDRA RAO, Feature Writer and Columnist, Chennai.

If we ask the lay readers why they read newspapers, the obvious answer would be to get news. However, what keeps the newspaper endearing and, in a way, enduring are the longer stories about people behind the news, about the humorous everyday experiences we all have, or the closer look at someone and the unexpected surprises we get in the process. In short, we call these features. In this substantially revised book on Feature Writing, the author with her vast experience discusses various aspects of Feature Writing. She focuses on different types of features found in newspapers—Humour and Satire, Brights, Human Interest Features, Travel Features and News Features—and illustrates each of these. In addition, she provides a detailed description of Profiles, Interviews, and Online Features with examples, and gives a clear analysis of Feature Writing Techniques.

Intended as a text for students offering courses in Journalism, this book would also be extremely useful for freelance writers, and anyone who has a flair for writing.

**WHAT IS NEW TO THE SECOND EDITION**
- Includes two new chapters on Obituary and Tribute, and Sports and new sections such as Blogs and Professionalism in Journalism.
- Provides more illustrations culled from recent newspapers.
- Gives explanatory notes on some key words used in the book, and a section on Vocabulary.

**WHAT THE REVIEWER SAY**

In this delightful book on [Feature Writing], Meera Raghavendra Rao brings home to us that writing a story or a novel is one way of discovering sequence in experience, of stumbling upon cause and effect in the happenings of a writer’s own life. In my view Meera Raghavendra Rao’s book on FW is an exceptionally good and useful book not only for all students of Journalism but also for all writers interested in FW.

—V. Sundaram, News Today


Latest Print 2012 / 212 pp. / 16.0 × 24.1 cm
TARNI PRASAD, Associate Professor, Department of Linguistics, Addis Ababa University, Addis Ababa, Ethiopia.

This compact and student-friendly text, now in its Second Edition, continues to cover in a single volume the diverse aspects of Linguistics, such as phonetics, phonology, morphology, syntax, semantics, historical linguistics, and language families. It also deals, in detail, with Applied Linguistics, Sociolinguistics, Psycholinguistics, and Stylistics. Written in a straightforward and easy-to-understand style, this book is thoroughly practical and should be of great help to students in understanding the basic concepts with ease.

In the second edition, chapters on Morphology and Psycholinguistics have been thoroughly revised.

The book is intended as a text for senior undergraduate and post-graduate students [BA (Hons.) and MA] of English, and undergraduate and postgraduate students [BA (Hons.) and MA] of Linguistics. In addition, this book would be of great help to all those who wish to have a general knowledge of English linguistics.

KEY FEATURES
• All the concepts of linguistics are discussed in a single book.
• Linguistic concepts are explained in detail, with examples, diagrams, and tables for better comprehension of the subject.

CONTENTS:


PUSHPINDER SYAL, Professor, Department of English, Panjab University, Chandigarh.

D.V. JINDAL, Former Faculty Member, Postgraduate Department of English, Government College, Ludhiana.

This compact and engagingly elegant text, now in its Second Edition, continues to provide a succinct introduction to Linguistics. The aim of the book is to introduce basic concepts in Linguistics, and to familiarize the students with the fundamentals of modern Linguistics in a clear and simple manner.

Each chapter is expository as well as explanatory with examples. Most of the examples in grammar and semantics are based on the structure of the English Language, but the principles of language study discussed in the text are applicable to any language in general.

Divided into three sections, Section I: The Study of Language; Section II: The Study of Grammar; and Section III: The Study of Semantics, each chapter, besides detailing with the concepts, contains Summary and Comprehensive Questions for better understanding of the subject and enhancing comprehension skills.

What’s New to this Edition
• An exclusive chapter on the Study of Language Variation (Chapter 5) with important terms such as Dialect, Accent and Stylistics.
• More examples given in the grammar section.
• Devotes an entire chapter to a new topic—Supra-sentential Grammar—a must for Linguistics study today.

Students of Linguistics and postgraduate students of English pursuing courses in Linguistics should find this text highly useful and a handy companion for their study.


Course in Phonetics and Spoken English, A, 2nd ed.

J. SETHI, formerly Professor of English, Central Institute of English and Foreign Languages (CIEFL), Hyderabad.
P.V. DHAMIJA, Professor, Department of Phonetics and Spoken English, CIEFL, Hyderabad.

This much improved revised edition of the book takes into account the needs of the student in the context of the present curricula followed in various universities and English language teaching institutes. This edition therefore devotes a new chapter to Assimilation, a section to Tones in relation to Attitudes, and highlights certain important aspects of pronunciation, such as rules of word accentuation.

Starting with general phonetics, the book goes on to give a brief functional account of general phonology and then a selective and yet fairly exhaustive description of the phonetics and phonology of English. It also provides a number of conversational passages in phonetic script as well as in ordinary spelling for practice in reading aloud. What sets this text apart is its novelty of approach and lucidity of treatment. English pronunciation is followed as per the “Received Pronunciation of England”.

This text is specially designed for postgraduate students of English, undergraduate and postgraduate students of linguistics, and for those undergoing secondary and tertiary level teachers’ training programmes in English.

KEY FEATURES
• Suitable and adequate practice material has been included.
• Numerous exercises are given at the end of each chapter, which are geared to teaching as well as testing.
• A revised IPA chart is provided.


Latest Print 2013 / 232 pp. / 16.0 x 24.1 cm

Handbook of Pronunciation of English Words, A (with two CD-ROMs)

J. SETHI, Formerly, Professor of English, Central Institute of English and Foreign Languages, Hyderabad.
D.V. JINDAL, Professor, Postgraduate Department of English, Government College, Ludhiana.

Addressed to an educated user of English in the Indian subcontinent, together with a set of two CDs, the book offers a ‘Teach Yourself’ course in the pronunciation of English words. Written in a non-technical language, it contains considerable amount of practice materials too.

The book is in two parts: Part I deals with important facts about the pronunciation of English words and the principal attributes of good speech; Part II contains a pronouncing dictionary of some 2,500 commonly used, but often mispronounced, words of English and about 60 foreign words and phrases often used in English. The selection of the words and phrases is based partly on research and partly on the authors’ long experience.

SALIENT FEATURES
• The book takes into account the socio-linguistic realities of the use of English on the Indian subcontinent, and accordingly attempts the task of remediation of English pronunciation.
• The book contains a chart highlighting the problems of Indian learners of English with various mother-tongue backgrounds.
• It provides an exhaustive treatment of the relationship between sound and spelling in English.
• A chapter is specially devoted to some general rules of pronunciation including, among other things, the treatment of double letters and ‘silent’ letters, and the pronunciation of the past and plural suffixes and contracted forms such as I’ve, she’d shan’t, mightn’t.
• The dictionary is meant not only for reference, but also for regular learning.
• The pronunciation of words is given in the phonetic script, which is adequately explained in the book itself.
• Both the practice materials and the Dictionary are recorded on two CDs available with the book.


Latest Print 2013 / 112 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-0670-7 / ₹ 250.00
Natural Language Processing: A Paninian Perspective

AKSHAR BHARATI, is the personification of a group working on NLP at Indian Institute of Technology Kanpur.
VINEET CHAITANYA, Indian Institute of Technology Kanpur.
RAJEEV SANGAL, Director, Indian Institute of Information Technology, Hyderabad and former Professor of Computer Science and Engineering, Indian Institute of Technology Kanpur.

This book is on Natural Language Processing presented with a Paninian perspective. Panini (circa 500 B.C.) was a grammarian and well known for his contribution to the grammar and structure of the language. In this book the reader is first introduced to Natural Language Processing and then to Paninian grammar and framework for processing of modern Indian languages using the computer. Thereafter, a comparison of Paninian grammar framework with that of modern western computational grammars is presented.

This book is useful for courses in Computational Linguistics in the linguistic departments, and for NLP in computer science departments.

KEY FEATURES
• This book is the first of its kind in presenting a comparison of Paninian Grammar (PG) with the existing modern western computational grammars.
• Introduces three western grammar frameworks using examples from English: Lexical Functional Grammar (LFG), Trees Adjoining Grammar (TAG), and Government and Binding (GB). The presentation does not assume any background on part of the reader regarding these frameworks.
• Each presentation also discusses either the applicability of the framework to free word order languages, or a comparison with PG framework.
• It is a single source in path-breaking research on Natural Language Processing using the classic and time-tested Paninian framework.

CONTENTS:

Latest Print 2010 / 240 pp. / 15.3 × 22.9 cm
ISBN-978-81-203-0921-0 / ₹ 175.00
English enjoys a preeminent position today among world languages. However, even the large populations that are proficient in the vocabulary and grammar of English are not equally proficient in the pronunciation of the language. This adult population is the target audience of this book.

Based on the RP (Received Pronunciation) model — the most widely understood English pronunciation across the world — this text covers the entire range from sound to connected speech, i.e. dialogues, anecdotes, passages and short speeches. The book is in two parts: Part I deals with all important aspects of English pronunciation; Part II comprises a pronouncing dictionary.

The book chiefly aims at remediation, and most of the practice materials and exercises are given with this end in view. Besides, with the help of numerous listening exercises, the course sharpens the learners’ ability to comprehend spoken English with ease, thereby training them to face real-life situations (for example, interviews) with confidence and competence.

The book will prove to be of great value to postgraduate students of English and linguistics, teacher-trainees in colleges of education and institutes of English, college faculty and school teachers, institutes offering courses in spoken English, candidates preparing for competitive exams, and radio and TV newscasters.

**CONTENTS:**

Latest Print 2010 / 232 pp. / 16.0 × 24.1 cm
Practical Course in Spoken English, A, 2nd ed. (with CD-ROM)

J.K. GANGAL, Director of the Centre for Creativity and Human Resource Development (CCHRUD), Delhi.

This well-established and highly successful book, now in its Second Edition, builds on the strength of the previous edition, retaining many of the topics and incorporating some new topics in consonance with the present-day needs.

The accompanying CD contains all the attributes of a good speech—proper stress, intonation and correct pronunciation—to enable better comprehension of the topics. Some of the conversations and Words Often Mispronounced are also included in the CD to emphasize on the correctness of learning and enrich the learners in language skills.

Primarily intended for students and learners who wish to enhance their spoken English skills, this book will be useful also for those who have long-felt need to communicate in English. It has all the rich ingredients to facilitate the learners talk effectively and confidently:

• About 50 real-life conversations to improve one’s speech
• Extensive list of vocabulary to aid in group discussions
• Several useful language tips to pursue the global quest for personal and academic excellence

NEW TO THIS EDITION
– Discusses the need of the body language
– Gives dos and don’ts for an effective communicator
– Provides a list of a few non-verbal behaviours and their universal interpretation

KEY FEATURES
• Application of idioms for effective and creative speaking
• Learning of expressions and phrases for better practical presentation
• Numerous word meanings to clarify doubts
• Grammar and usage in almost all the chapters to grasp the correct syntax
• Activity to instil confidence in public speaking


JATINDRA KUMAR DAS, Associate Professor, Department of Law, at University of Calcutta, Kolkata.

The book written with a rich teaching experience of the author at National Law University and State University, attempts to critically analyse Indian High Court and Apex Court cases on the Law of Civil Procedure. It also evaluates the relation between statutory procedural law and case laws as subject. Most importantly, the book presents recent judgments of Supreme Court, particularly based on Post Amendment Acts of 1999 and 2002. Also, these cases have been analysed in addition to a critical examination of the radical and far reaching effect of the Code.


Laws for Business, 3rd ed.

M.M. SULPHEY, Professor and Head, HR Domain, TKM Institute of Management, Kollam, Kerala.
AZ-HAR BASHEER, Assistant Professor at TKM Institute of Management, Kollam, Kerala.

The knowledge of business laws is very important for the survival and growth of any organisation. This comprehensive and well-written book, in its Third Edition, introduces Companies Act 2013, replacing the Companies Act, 1956 (chapter 10). This newly incorporated Companies Act, 2013 is the first major revision in the company law in more than 50 years. This edition brings out the significant changes proposed by the 2013 Act as compared to the 1956 Act. Inclusion of The National Food Security Act, 2013 as chapter 35 is another addition to the book. The book continues to present a thorough discussion of various legal topics such as contract laws, corporate laws, labour legislations, taxation laws and the related acts including the Sale of Goods Act, 1930, the Negotiable Instruments Act, 1881, the Consumer Protection Act, 1986, the Insurance Act, 1938, the Limited Liability Partnership Act, 2008, the Companies Act, 2013, the Foreign Exchange Management Act, 1999, the Environment Protection Act, 1986, Right to Information Act, 2005, and Right to Education Act, 2009 and other important acts.

The book contains many practical examples and studies of different law cases which makes it more interesting and authentic. In addition, the book provides Review Questions at the end of each chapter. Moreover, mind maps provided in most of the chapters give readers a brief idea about the concepts discussed. More practical exercises in the form of case studies in the questions section, and format of a number of documents makes the book quite informative.

The book is primarily designed for the undergraduate and postgraduate students of management and other related courses for their subject Business Law. Besides the management students, the professionals and legal practitioners will also find the book very useful.


Latest Print 2014 / 456 pp. / 16.0 × 24.1 cm
India has emerged as a hub of the IT industry due to the phenomenal growth of the IT sector. However, this huge growth rate has brought with it the inevitable legal complications due to a switch over from paper-based commercial transactions to e-commerce and e-transactions. This book discusses the legal position of Information Technology (IT), e-commerce and business transaction on the cyberspace/Internet under the Information Technology (IT) Act in India.

Divided into five parts, Part I of the text deals with the role of the Internet, e-commerce and e-governance in the free market economy. Part II elaborates on various laws relating to electronic records and intellectual property rights with special reference to India. Efforts are being made internationally to rein in cyber crimes by introducing stringent laws. Part III deals with various rules and regulations which have been introduced to get rid of cyber crimes. Part IV is devoted to a discussion on various offences committed under the IT Act, penalties imposed on the offenders, and compensations awarded to the victims. Finally, Part V acquaints the students with the miscellaneous provisions of the IT Act.

This book is designed as text for postgraduate students of Law (LLM) and undergraduate and postgraduate students of Information Technology [B.Tech./M.Tech.(IT)] and for Master of Computer Applications (MCA) wherever it is offered as a course. Besides, it will prove handy for scholars and researchers working in the field of IT and Internet.

**KEY FEATURES**

- Includes Appendices on the role of electronic evidence, information technology rules, ministerial order on blocking websites, and the rules relating to the use of electronic records and digital signatures.
- Provides a comprehensive Table of Cases.
- Incorporates abbreviations of important legal terms used in the text.

This book presents a comprehensive account of the various contours of the environmental jurisprudence in India. It covers the Indian constitutional, legislative, administrative and judicial strategies that have shaped the Indian environmental jurisprudence against the backdrop of the various international efforts to control pollution and preserve the global environment. It deals with the constitutional framework provided for the preservation and protection of Indian environment. In this context, the book gives an extensive picture of Indian administrative and legislative policy framework along with the latest developments in the area. The salient and most important feature of the book is its in-depth account of the innovative judicial enforcement of the constitutional and legislative prescriptions as reflected in the catena of judicial decisions including the latest ones. In this respect, the fundamental right to life guaranteed by Article 21 of the Indian Constitution has been given a very liberal interpretation in order to make it the chief constitutional edifice of the Indian Constitution has been given a very liberal interpretation in order to make it the chief constitutional edifice of the Indian environment. The book is also radical in its approach to support marginalized communities, including women in distress, through mediation and arbitration which are institutionalized by highlighting the availability of judicial remedies for the poor and the excluded in South Asia. The central idea of this book is the inevitable link between judicial capacity and good governance. It critically discusses the state of ‘access to justice’ to the poor and addresses the problems of various structures and procedures approached by the poor to seek justice. The formal system remains locked in the whimsical fantasies of the lawyers and the state structure which aborts the rule of law for the privileged and works in open defiance of the increasing disempowerment of the poor due to an overwhelming judiciary.

This book highlights the growing need for restorative justice as against retributive and thus emphasizes a more intensive action research in alternative dispute resolution systems (ADRs). This argument is further developed to assess the competence of many people led informal institutions of judiciary such as jirgas in Pakistan or lok adalats in India. The book is also radical in its approach towards the various informal systems to support marginalized communities, including women in distress, through mediation and arbitration which are gaining a new intellectual space in justice discourse. This book tries to reunite and rebuild faith in public institutions by highlighting the availability of judicial remedies for the poor and the excluded in South Asia. The central idea of this book is the inevitable link between judicial capacity and good governance. It critically discusses the state of ‘access to justice’ to the poor and addresses the problems of various structures and procedures approached by the poor to seek justice. The formal system remains locked in the whimsical fantasies of the lawyers and the state structure which aborts the rule of law for the privileged and works in open defiance of the increasing disempowerment of the poor due to an overwhelming judiciary.

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Introduction to the Constitution of India, 6th ed.

BRIJ KISHORE SHARMA,
Former Chairman, Copyright Board.
Earlier he was Chairman, National Book Trust (NBT), India.

The students and teachers have again shown their preference to this book. The author has been receiving favourable comments from the readers. To maintain its standard the author has updated case law and related information. This edition incorporates the law as propounded by the Supreme Court. All important decisions of the Supreme Court reported till July 2011 have been duly referred and cited. It contains a new chapter on Public Interest Litigation. The book is designed and written as a text for students of Law (L.L.B. and L.L.M.), Political Science and Public Administration. It is designed to make it suitable for Civil Services and Judicial Services examinations. It provides guidance and overview of our Constitution to all those who seek knowledge.

WHAT IS NEW TO THIS EDITION
1. A new chapter on Public Interest Litigation
2. Power of the President to remove a Governor
3. Qualification and duties of Advocate General
4. Role of Patel, Rau and Dr. Ambedkar in the making of the Constitution
5. Power of High Court to direct C.B.I.
6. Criticism of Collegium process
7. Limitations of legislatures to remove a member
8. Meaning of religious instruction
9. Position of Additional Judge of a High Court
10. Refund of tax paid in excess
11. Basis of equal pay for equal work
12. List of Committees of the Constituent Assembly
13. Permissibility of Narco analysis etc.
14. Constitutionality of MPLAD scheme

CONTENTS:


VINOD V. SOPLE, Director at ITM-SIA Business School, Dombivli (Mumbai).

The book presents a comprehensive treatment of Intellectual Property concepts and its applications in Indian industry. Now, in its Fourth Edition, it includes a new chapter on IPR in Biotechnology and numerous cases/caselets in most of the chapters. It provides a strategic framework for IP management, leading to competitive advantage for a business enterprise. Besides explaining the conceptual framework and practices of IP management, the book discusses IP as a strategic tool, its commercial exploitation and strategies for risk management of IP. Web-based material comprising chapter-wise PowerPoint Presentations (PPTs) and Multiple Choice Questions is available at www.phindia.com/sople

This book is primarily intended as a text for postgraduate students of management, students of engineering and those who are pursuing certificate, postgraduate diploma or degree courses in IPR. In addition, professionals and corporate decision-makers should find the text valuable.

KEY FEATURES
• Discusses IPs such as Patents, Copyrights, Trademarks, Trade Secrets, Designs, Semiconductor Circuit Layouts and Geographical Indications, etc.
• Practices issues of IPRs in Cyber Space, Fashion Design, Biotechnology and Pharmaceutical industry.
• Classifies systems in practice for various IPs.
• Provides IPRs legal provision in Indian context.

P.K. PADHI, Professor, Xavier Labour Relations Institute (XLRI), Jamshedpur.

This comprehensive and well-organised text, now in its Second Edition, explains, with great clarity and precision, the labour and industrial laws such as the Industrial Disputes Act, the Factories Act, and the Contract Labour Act. While giving a broad perspective of the subject, the text brings out the objectives behind the enactment of every legislation, discusses the relevant case laws and shows how the Constitution is related to labour laws. Formulas for the calculation of compensation for retrenchment, death, permanent disablement are also provided. Legal jargon has been completely avoided so that anyone having some knowledge of the subject can understand these laws with ease.

In this edition, the amendments made in the ID Act, the ESI Act, the Payment of Gratuity Act, the Payment of Bonus Act and the Employees’ Compensation Act have been incorporated.

The book is primarily meant for the undergraduate and postgraduate students of law, management and the postgraduate students of commerce. Besides, students pursuing professional courses such as Company Secretaryship (CS) and Cost Accountancy (ICWA) would also find the book very useful.


Latest Print 2012 / 952 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4498-3 / ₹ 575.00

GURDEV SINGH, Librarian, Sri Guru Gobind Singh College of Commerce, Delhi.

Reference and information services are considered as an important activity of a modern library. These services can be provided by means of reference sources. This book provides the overviews of different types of reference sources, such as encyclopaedias, directories, yearbooks, dictionaries, geographical sources, biographical sources, statistical sources and handbooks.

Dexterously organised into four parts, this book describes various aspects of reference/information services, such as translation service, reference service, referral service, Selective Dissemination of Information (SDI) and Current Awareness Services (CAS). Besides, a number of important national and international information systems are also covered in this book.

It is specially designed to cater to the needs of the students of BLiBSc and MLiSC of various universities and institutions. This book will also be very useful for teachers, working librarians, information scientists, and informational professionals in general. In addition to this, it should also prove handy for the library professionals dealing with information sources and services and for those who are involved in organisation and management of reference section of a library.


Latest Print 2013 / 536 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4639-0 / ₹ 525.00
Causality and Science

NALINI KANTA BRAHMA, was formerly Professor of Philosophy, Presidency College, University of Calcutta and Principal, Hooghly Mohsin College, Kolkata.

Causality and Science may at first sound as abstract and, perhaps, as esoteric subjects. For, while one seems to touch on the transcendental and the metaphysical realm, the other seems to be rooted on terra firma. However, while reading through this compact and concise book, written with great clarity and precision, one comes to realize that there is no clash between these two, and indeed reconciliation between them is possible.

The author, with his remarkable erudition and scholarship, contends that the whole conception of science is so much bound up with the causal concept that it seems hardly possible that science could ever be able to do without it. He argues that space, time and causality are the three categories on which science is built.

The book also shows that of the four causes—material, formal, efficient, and final, how the material and efficient causes are given prominence. In this process, the book demonstrates the inadequacy of the empirical view of causation, and shows that material cause combines with the efficient and final causes, or how these coalesce into one and only the adequate cause remains. There is no antagonism between the noumenon and the phenomenon or the Brahma and the Maya.

Even though relativity may reign supreme for many, the author says that there is no opposition between perfect spontaneity and freedom and law and system on the one hand, and causality and determinism on the other. Ultimately, a reconciliation between causality and freedom can be effected, and the Reality that there is neither ‘free’ nor ‘unfree’, but transcends both the qualities can emerge as the Absolute which can solve for ever all oppositions.

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The book would be of interest to students of philosophy and any reader who has a philosophical and scientific bend of mind to delve deeper into the relation between causality and science.


Latest Print 2007 / 84 pages (Hard Cover) / 13.9 × 21.6 cm

E-book

Fundamentals of Religion, The

NALINI KANTA BRAHMA, was formerly Professor of Philosophy, Presidency College, University of Calcutta and Principal, Hooghly Mohsin College, Kolkata.

We find today in different parts of the world fierce feuds and strifes. Religious fanaticism and fundamentalism contribute in a substantial way to such strifes and conflicts among people. We also find a large number of people are steeped in superstitions, irrational beliefs, and indulge in mere ritualism. Where true religion prevails, such fanaticism and fundamentalism find no place. A deep comparative study of world religions enables one to drive away all superstitions and fanaticism. For religion, in the true sense, is an abiding faith in the values of life, and God is the embodiment of all values. Religious experience accordingly implies the realisation of the Absolute.

What Prof. Nalini Kanta Brahma tries to do in this well-researched book, written in a clear and straightforward style, is to demonstrate the nobility and positive aspects of each religion he has discussed. He classifies religion into three categories: Impersonal—under which he brings in Buddhism, Jainism and Confucianism; Personal—in this category he describes Christianity, Islam and Vaishnavism; and Suprapersonal—under which he analyzes Vedantism, Sufism, Taoism and the Johannine Gospel (the Gospel of St. John, one of the twelve disciples of Jesus Christ). The fundamentals of each religion are discussed with great clarity and genuine appreciation.

Knowing very well there are a large number of opponents to religion, the author vigorously defends the religious view. He successfully meets the various objections of Freud, Marx and Bertrand Russel, among others. For, he says, agnosticism, atheism and scepticism are based on a narrow and limited view of life.

Realisation of divinity by man is the universal characteristic of all religions, and the author contends that it should aptly be called the universal religion. This realisation of the divinity is so marked in the suprapersonal religions and being a votary of such religions, he stresses that they are on a different level. If a study of this world religion is included in the course on comparative religion for students, it would certainly help towards dispelling erroneous notions about religion and drive away many superstitions, fanaticism and communalism, the last being a cancerous growth that eats into the very fabric of a nation.

Besides students of philosophy who study comparative religion as one of their subjects, all enlightened persons who have an abiding faith in religion should find reading this text an exhilarating and ennobling experience.


Latest Print 2009 / 312 pp. (Hard Cover) / 13.9 × 21.6 cm
**Last Frontiers of the Mind: Challenges of the Digital Age**

A. MOHANDAS MOSES (Retd. IAS).

In this original and brilliantly written book, Mohandas Moses has embarked on a daring theme—the challenge of artificial intelligence to the human mind and human creativity.

To illustrate the central theme, the author has brought together the views of a galaxy of eminent philosophers, cognitive scientists and neuroscientists who have explored the phenomenon and evolution of the human mind and consciousness, and the growth of artificial intelligence. He has described the manner in which memory, language, creativity, mathematics, teaching-learning and chess-playing could be altered by the digital culture. He asks, should we use allow our personas to be blue matched to the template of the machine mind?

This book will be of great interest as much to academics, experts on artificial intelligence, as to the general reader who wishes to know about the challenges to the human intellect and creativity in the digital age.


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**Essence of Hinduism, The**

2nd ed.

ACHARYA DURGA DAS BASU, Sarasvati Vacaspati, Vidyaayaridhi, Prajnavaharati, Nyanaratnakara, Neetibhaskara, Nyanaharati, Nitya Sarasvati, Manava Ratna, was National Research Professor of India. A renowned expert in Constitutional Law, he wrote many books including his magnum opus, *Commentaries on the Constitutional Law of India*.

If any religion in the world has been the least understood, that is the Hindu religion, not because it is inexplicable, not because it is irrational or illogical—but because it is so big.

Thus begins Dr. Durga Das Basu’s scholarly exploration of the essence of Hinduism. Abandoning historical and non-essential considerations, the book looks upon Hinduism, not as a faith, but a set of certain universal principles of truth, evolved, tested and verified through the ages and on which there is a consensus amongst the various Upanishads. It is these propositions that have been gathered as the essence of Hinduism in this work. To understand this essence is to grasp simultaneously the ultimate aim of a person’s life to achieve the maximum of purity and perfection. The diverse paths and the mental and physical exercises that lead to salvation are defined and explained.

Like in his other works, the author adopts a comparative approach that makes this a book on comparative religion with special reference to the essential doctrines of the Hindu religion. This approach also underscores the thought that the surest way to achieve communal harmony is to bring to the followers of different religions, the essential principles of each.

Extensively explained and well documented, this is a fascinating glimpse into the ascent of Hinduism.


**Latest Print 2002 / 140 pp. (Hard Cover) / 16.0 × 24.1 cm**

ISBN-81-203-2140-5 / ₹ 150.00
NALINI KANTA BRAHMA, formerly Professor of Philosophy, Presidency College (now Presidency University), Kolkata, and Principal, Hooghly Mohsin College, Hooghly.

Many people have confused notions of Hindu spirituality. In this compact book, Dr. Nalini Kanta Brahma, an erudite scholar and a well-known exponent of Hindu spirituality, captures its essence, as embedded in the Vedas and the Upanishads.

Divided into three parts—Part I, Essence of Hindu Spirituality; Part II, Vedantic Transcendence; and Part III, Studies in the Upanishads, the book gives a clear analysis of the teachings of the Hindu scriptures. It starts with an Introduction which shows the greatness of the Brihadaranyaka Upanishad and the validity of the Upanishads, which Shankaracharya unmistakably showed to be part of the Vedas. The book then goes on to give, in the next three sections, studies on Karma Yoga (performing selfless action as a path of realization of emancipation), Bhakti Yoga (philosophy and practice of devotion), and Jñāna Yoga (knowledge as a means for realization of the Absolute, that is, Brahmavidya). Part II is devoted to a detailed discussion on Vedantic Transcendence and Vedantic monism as expounded by Shankaracharya. Finally, Part III delves deep into the teachings contained in the Brihadaranyaka Upanishad.

This well-researched and clearly enunciated study would be valuable for postgraduate and senior undergraduate students of Philosophy and students of Comparative Religion. It would also be very useful to anyone who has an abiding interest in Hindu spirituality.


**latest Print 2013** / 144 pp. / 16.0 × 24.1 cm (Hard Cover) / ISBN-978-81-203-4712-0 / 595.00

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NALINI KANTA BRAHMA, was formerly Professor of Philosophy, Presidency College, University of Calcutta and Principal, Hooghly Mohsin College, Kolkata.

None else could have made a better presentation on the practical side of Hindu religion, with its underlining concepts of Hindu faith, than Dr. Nalini Kanta Brahma. His classic work, *Philosophy of Hindu Sadhana*, is now being relaunched in the Eastern Economy Edition for the benefit of students, researchers, and all those who have an abiding interest in philosophy and religion.

The author stresses those characteristics of Hindu religion that bring out its kinship with the higher religious thoughts of the world so that the reader can discern a common fabric of organic unity of higher religions.

The text brings to free the correlation between theory and practice of different Hindu philosophical systems. Sādhanā, the instrument to attain perfection as propounded in Hindu philosophy—being a means to a better end—has been discussed in the text in its various forms as followed by different religious systems of the Hindus.

Part I of the book deals with the function and characteristics of Hindu Sādhanā in general. Part II elucidates the specific forms of Hindu Sādhanā that includes Karma, the path of prescribed actions, Jñāna, the path of higher intellect, and Bhakti, the path of devotional worship. The book also deals with Yoga, the form of Sādhanā as propounded by Patanjali. Finally, it emphasizes the importance and value of discipline and devotion that are inherent in the good practice of Hindu religion.


Logic: Informal, Symbolic and Inductive, 2nd ed.

CHHANDA CHAKRABORTI, Department of Humanities and Social Sciences, Indian Institute of Technology Kharagpur.

The Second Edition of this text continues to provide a comprehensive introduction to Logic, a subject that is increasingly becoming popular among students.

What distinguishes the text is its graded step-by-step approach to the subject, with informal logic forming the basis and Symbolic logic and Inductive logic forming the more advanced steps. The book also uses a hands-on approach to teaching of logic to induce self-learning, as shown in sections such as on how to create a truth table or a truth tree, on providing strategic tips for formal derivations, and on how to approach symbolization in predicate logic.

The Appendices, including those on Indian logic and the nature of inference in Indian logic, are designed to create greater awareness about the extent and depth of the field among students.

WHAT'S NEW TO THIS EDITION

• A new Appendix on Basic Set Theory. It covers all the fundamental concepts, principles and operations in Basic Set Theory.
• Some sections in Chapter 3 on Fallacies have been modified.
• Corrections/Modifications done wherever required.

Intended primarily as a text for students of Philosophy, the book would also be useful to students of Mathematics, Computer Science and Engineering where Logic is offered as part of their course.


Latest Print 2009 / 584 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3248-5 / 1395.00
The Third Edition of this well-received text encompasses the manifold administrative theories and management thought propounded and enunciated by administrative and management thinkers over the past several decades. The text incorporates major additions and revisions to make it more up-to-date, comprehensive and reader-friendly.

The text not only gives a complete and up-to-date analysis of administrative theories, but also introduces the reader to new concepts, approaches and techniques in public administration. Undergraduate and postgraduate students of public administration, and postgraduate students of political science and management should find this fully revised text to be of immense value.

Considerable changes are taking place today in the structure and working of governments all over the world. This, in turn, has necessitated a change in the approach to the study of government and politics. This well-organized and systematic study takes into account these developments and shift in approach in the field of comparative government and politics.

As the empirical study of political processes, structures and functions forms a major part of comparative political studies, the author examines them in detail. He also analyzes the many variables that are heterogeneous in nature. The book analyzes in tandem comparative government—which involves the study of different political systems with their institutions and functions—and comparative politics, which covers comparative governments and non-state politics. The latter also studies rule making, rule implementing and rule adjudicating.

Since different political systems are governed by the constitutions of the nations concerned, the book deals in detail with the constitutions of these countries. While the text gives a comprehensive coverage of constitutions such as UK, USA, France, Switzerland and Japan, it also deals with the constitutions of authoritarian States like Russia and China.

This text should be of great value to undergraduate and postgraduate students of political science as well as aspirants of civil services.


SAMIRENDRA N. RAY, Professor of Political Science, University of North Bengal, Darjeeling (West Bengal).

Designed primarily as an introductory textbook for graduate and senior undergraduate students offering comparative politics as a compulsory course, this finely integrated text is by far the most comprehensive, yet concise and critical analysis of the contending approaches, methods, and models and the theory-building efforts made in the second half of this century. The book provides a lucid and up-to-date presentation of the ramifications of the governmental process and political dynamics, issues and problems relating to the structure, function, process and operation of governmental and political organizations in a genuinely comparative perspective.

KEY FEATURES

- Emphasizes the emerging concerns of modern comparative politics in dealing with the non-western political systems and the politics of the developing areas.
- Gives a genuinely comparative analysis of the government and politics in various political systems prevailing across the world.
- Bases the analysis on authentic sources, with extensive citations.
- Provides a detailed Bibliography.


Development Administration

S.A. PALEKAR, Professor, Department of Political Science, Gulbarga University, Karnataka.

Development administration is based on two important concepts—administration of development and administrative development. It involves modernization of administrative structure, capabilities of personnel, and attitudinal and behavioural changes among the administrators. This book simplifies the administrative functions through its examples, theories and concepts, and deals with the field of development administration with an integrated approach.

This book throws light on the administrative development processes in and around the world. It also draws a parallel between how the administrative development has helped the nation in overall development, and what is the scenario in the developing countries, especially in India. It also focuses on the issues like programme and project management in India, Planning machinery of Social Welfare Service in India. It further dwells into the impact of the economic reforms on the social sectors of India. The book skillfully explains how the State plays a critical role in its socio-economic development, and how it faces the new challenges because of globalization and liberalization.

The book is intended for the postgraduate students of Public Administration and Political Science. Besides, it is equally beneficial for the students preparing for the Civil Services Examination.


Latest Print 2012 / 224 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4582-9 / ₹ 250.00

Contemporary Debates in Public Administration

Edited by
ALKA DHAMEJA is a Reader in the Faculty of Public Administration at the Indira Gandhi National Open University (IGNOU).

As a pertinent area of social sciences, public administration must reinvent itself in the wake of new developments in the areas of theory building, organizational reforms, information technology, participatory development, corporate ethics, humane governance, responsive administration, non-state organizations and administrative capability. This book makes an attempt to grapple with some of these contemporary concerns in order to generate a debate on the impact of globalization on public administration. In this collection of diverse topics that address various facets of public administration, the overall thrust is on developing indigenous approaches for meeting the growing demands of the changing scenario.

The book will be of immense use to students, academicians, researchers, policy makers and practitioners in public administration.


Latest Print 2010 / 396 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-2403-9 / ₹ 325.00
Disaster mitigation entails measures to reduce the physical, economic and social vulnerability of a community to disasters. It is still an untouched domain, suffering for want of systematic and committed research and development inputs. This collection of articles from several contributors illuminates the pertinence of those mitigation efforts that would prepare everyone related with disaster management to comprehend and approach the problem more holistically.

HUMANITIES AND SOCIAL SCIENCES
Political Science/Public Administration (FUNDAMENTALS/GENERAL)

Indian Government and Politics

PEU GHOSH is an Assistant Professor in the Department of Political Science, Lady Brabourne College, Kolkata, West Bengal.

After years of subjugation by the British colonial rulers, India attained a status of Independent State on 15 August 1947, a day to be reckoned with pride by all Indians. Struggling for her Independence, facing the trauma of partition, and finally establishing a sovereign democratic status for itself, the journey has undoubtedly been a roller coaster ride for India. This book comprehensively outlines the evolution of the Indian Politics, discussing all the constraints, challenges and shortcomings faced by Indian Polity till date. The book shows how State-Society interface, with special emphasis on civil society activities, can play an integral role in shaping the political fate of the country. In addition, this book not only presents the institutional aspects of Indian politics by underlying in details, the provisions of the Constitution, but also brings out the real working of the institutional framework in an ever-changing social and political environment. Organized into 22 chapters the book discusses in details the Constitutional development, The Preamble, The Fundamental Rights, The Directive Principles of State Policy, The Executive, The Legislature and The Judiciary at national and state levels followed by their critical appraisals as well as the Centre-State relation with its continuing tensions. To give a clear and panoramic view of Indian Political Scenario the book also focuses on local-self governments, national and regional parties in India, challenges to Indian political system and new social movements.

Intended as a textbook for the undergraduate and postgraduate students of Political Science and Law, this book is also useful for the aspirants for Civil Service and competitive graduate students of Political Science and Law. Designed as a standard text for undergraduate and postgraduate students of Political Science and also for the aspirants of Civil Services Examinations, the Second Edition of this book provides a thoroughly updated account of Indian politics, taking into consideration the Indian constitutional foundations and functioning of the various democratic institutions. It gives a holistic view of the political system of India that includes the State, Government (both central and state governments), the market, and the civil society, including infrastructures like the party systems in the nation and the states that are partly in the civil society and partly in the state. The text not only provides an updated account of the topics discussed but also brings to light new conceptual and theoretical issues underlying the transformation that is taking place in Indian politics. Besides undergraduate and postgraduate students, all those who wish to have a deeper understanding of the Indian political system will find the book extremely useful.

WHAT'S NEW TO THIS EDITION
• A new chapter (Chapter 9) on Local Self-Government—The Third Tier of the Federal Structure—An Unexplored Internal Frontier
• New Sections have been added to several chapters:
  – Chapter 9 Asymmetrical Federation, Reformist Discourse for a Better Federal Political Equilibrium
  – Chapter 13 Social Movements.


Latest Print 2012 / 500 pp. / 16.0 x 24.1 cm

Indian Politics: Constitutional Foundations and Institutional Functioning, 2nd ed.

M.P. SINGH formerly, Professor, Department of Political Science, University of Delhi.
REKHA SAXENA, Associate Professor, Department of Political Science, University of Delhi.

Designed as a standard text for undergraduate and postgraduate students of Political Science and also for the aspirants of Civil Services Examinations, the Second Edition of this book provides a thoroughly updated account of Indian politics, taking into consideration the Indian constitutional foundations and functioning of the various democratic institutions. It gives a holistic view of the political system of India that includes the State, Government (both central and state governments), the market, and the civil society, including infrastructures like the party systems in the nation and the states that are partly in the civil society and partly in the state. The text not only provides an updated account of the topics discussed but also brings to light new conceptual and theoretical issues underlying the transformation that is taking place in Indian politics. Besides undergraduate and postgraduate students, all those who wish to have a deeper understanding of the Indian political system will find the book extremely useful.

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  – Chapter 13 Social Movements.


Latest Print 2012 / 400 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4447-1 / 250.00
This book provides a comprehensive and up-to-date analysis of the Indian public administrative system, taking into consideration the various administrative structures at the Central, State, district and local levels.

The book begins by providing a brief historical outline of public administration in India and the changing role of Indian administration. Then it goes on to give a detailed discussion on the structure of the civil services, as well as the functions and roles of the:

- President
- Prime Minister
- Council of Ministers
- Finance, Home and External Affairs Ministries
- Central Secretariat

It also details the roles of the State administration consisting of the:

- Governor
- Chief Minister
- Chief Secretary
- State Secretariat

In addition, the text describes the features of local self government and conditions for its success, women’s participation in local self government, financial administration, and major committees and commissions constituted for administrative reforms in India. Finally, it deals with issues such as Information Technology, human rights and globalization—so crucial for public administration.

This well-organized book is intended for the undergraduate and postgraduate students of Political Science and Public Administration. Besides, students preparing for civil services examinations and all those who are interested in the study of Indian Administration will find the book quite handy.

Established after World War II, the United Nations strives to save successive generations from the scourge of war. This vital world body has resolved many conflicts through its political and peacekeeping missions, and nurtured peace through its development support. However, the challenges that the United Nations faces in the 21st century are much more complex and deadly than they were 60 years ago. Reforming the United Nations should therefore be a matter of great interest to the international community.

To tackle the challenges ahead, the United Nations needs to reinvent itself in various ways. This book suggests measures for restructuring the Security Council, rationalizing the constituent systems of various UN bodies, and strengthening the peacekeeping, corruption control and accountability mechanisms. The book is a collaborative endeavour, involving contributions from international authority figures in various areas related to UN work.

Reinventing the United Nations would be of interest to the public and particularly the postgraduate students of political science, international law, and international relations, as well as diplomats, public affairs professionals and social science scholars at various levels.


The book focuses on the need for Governance for Sustainable Human Development to manage the country’s social as well as economic resources leading to better development—founded on four pillars of Accountability, Transparency, Predictability, and Participation.

Highlighting its theme in the initial chapters in the New Public Management perspective, the book goes on to unravel the major administrative loopholes in Indian administration, such as lack of transparency and accountability, and the stranglehold of corruption, all of which lead to human deprivation. Later chapters give a synoptic overview of administrative reforms so far undertaken in India, and emphasize the effectiveness of governance in establishing appropriate balance in relative roles of public, private and civil society organizations, rights and responsibilities of politicians, bureaucrats and community, and economic and social justice. The book closes on a positive note strongly reiterating administrative re-engineering to meet the challenges of the twenty-first century for ensuring a holistic development of the country.

The book will be of immense use to the students and teachers of public administration, social science, political science, and those who practise public administration. It will also be useful to a large number of government departments—both at the union and the state levels.


Latest Print 2007 / 404 pages (Hard Cover) / 16.0 x 24.1 cm
Governance and Poverty Reduction: Beyond the Cage of Best Practices

Edited by

AMITA SINGH, Professor of Law and Governance at the Centre for the Study of Law and Governance, Jawaharlal Nehru University (JNU), New Delhi.
KAPIL KAPOOR, Country Manager for Zambia at The World Bank, Washington DC.
RABINDRANATH BHATTACHARYYA, Reader in Political Science and Public Administration at the University of Burdwan, West Bengal.

Poverty reduction in South Asia is a precondition for sustaining any form of reforms in governance. The new public management reforms which started in South Asia from Sri Lanka taking the initiative in 1977–78 have been a decisive break from the previously practiced State driven protectionist system. Investment in the region has been rising and even per capita income has shown some increase, yet the state has not been able to lead these reforms appropriately and efficiently. Thus poverty has not been reduced, ordinary people continue to languish under government programmes and the socially excluded remain outside the mainstream decision making bodies. Governance in South Asia faces the single most important challenge of poverty reduction which continues to blunt and disfigure capacity, self esteem and service delivery system to the poor. This book attempts to bring out microlevel studies from many regions in South Asia to address issues of entrepreneurship, knowledge and professionalism.

As an initiator of the idea on developing a critique to the straightjacketed 'best practice' research, this book questions the standard practice in evaluating administrative reforms as not being the true base for knowledge. Administrators need to balance capacity and control in every implementation programme. Confining to the knowledge of 'best practices' may conceal enormous amount of information from the 'less than best' practices which may be necessary to sustain good initiatives of public managers.

This book highlights areas of active networking, partnerships and collaborations amongst state and non-state bodies, NGOs and specialist Science and Technical Organizations. The true nature of governance is explained and demonstrated through the processes which otherwise pass off undetected in macro-understanding of governance.


Latest Print 2009 / 352 pp. (Hard Cover) 17.8 x 23.5 cm ISBN-978-81-203-3698-8 / 550.00
This book tries to reunite and rebuild faith in public institutions by highlighting the availability of judicial remedies for the poor and the excluded in South Asia. The central idea of this book is the inevitable link between judicial capacity and good governance. It critically discusses the state of ‘access to justice’ to the poor and addresses the problems of various structures and procedures approached by the poor to seek justice. The formal system remains locked in the whimsical fantasies of the lawyers and the state structure which aborts the rule of law for the privileged and works in open defiance of the increasing disempowerment of the poor due to an overwhelming judiciary.

This book highlights the growing need for restorative justice as against retributive and thus emphasizes a more intensive action research in alternative dispute resolution systems (ADRs). This argument is further developed to assess the competence of many people’s led informal institutions of judiciary such as Saalish in Bangladesh, Jirgas in Pakistan or Lok Adalats in India. The book is also radical in its approach towards the use of alternative dispute resolution systems to support marginalized communities, including women in distress, through mediation and arbitration which are gaining a new intellectual space in justice discourse.

This book is an indispensable guide to administrators, and social scientists interested in governance and legal research. It would also be useful for those working in the non-state sector of pro-poor reforms.


Latest Print 2009 / 188 pp. (Hard Cover) 17.8 × 23.5 cm ISBN-978-81-203-3697-1 / ` 350.00
Introduction to the Constitution of India, 6th ed.

BRIJ KISHORE SHARMA, Former Chairman, Copyright Board. Earlier he was Chairman, National Book Trust (NBT), India.

The students and teachers have again shown their preference to this book. The author has been receiving favourable comments from the readers. To maintain its standard the author has updated case law and related information.

This edition incorporates the law as propounded by the Supreme Court. All important decisions of the Supreme Court reported till July 2011 have been duly referred and cited.

It contains a new chapter on Public Interest Litigation.

The book is designed and written as a text for students of Law (LL.B. and LL.M.), Political Science and Public Administration. It is designed to make it suitable for Civil Services and Judicial Services examinations. It provides guidance and overview of our Constitution to all those who seek knowledge.

WHAT IS NEW TO THIS EDITION
1. A new chapter on Public Interest Litigation
2. Power of the President to remove a Governor
3. Qualification and duties of Advocate General
4. Role of Patel, Rau and Dr. Ambedkar in the making of the Constitution
5. Power of High Court to direct C.B.I.
6. Criticism of Collegium process
7. Limitations of legislatures to remove a member
8. Meaning of religious instruction
9. Position of Additional Judge of a High Court
10. Refund of tax paid in excess
11. Basis of equal pay for equal work
12. List of Committees of the Constituent Assembly
13. Permissibility of Narco analysis etc.
14. Constitutionality of MPLAD scheme

CONTENTS:

Latest Print 2011 / 464 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4419-8 / 275.00
The Third Edition of this comprehensive and well-organized book, continues to dwell on the multidimensional aspects of international relations, taking into account the present undergraduate and postgraduate curricula of different universities.

Divided into 20 chapters, the book gives a panoramic view of international relations and highlights, in the process, the Third World problems and their role in international politics and national liberation movements. Dr. Peu Ghosh, with her expertise in the subject and rich experience, gives a masterly analysis of the theory and practice of International Relations (IR) in the text.

The book begins with a detailed discussion on the evolution, nature and scope of international relations; different approaches to IR; state and non-state actors; national power; balance of power; and foreign policy. It then goes on to give a comprehensive coverage of such topics as the major world events after World War II and their impact on international relations and on international organizations such as the UN and its principal organs, regional organizations like OAU, The SAARC and ASEAN. The book concludes with a discussion on international law, international morality, Indian foreign policy, and environment and IR prominent economic institutions and arrangements (IMF, WTO, G-20 and so on).

Intended primarily as a textbook for undergraduate and postgraduate students of Political Science and of International Relations, and undergraduate students of History, this book should also be of great value to aspirants of civil services and so on).

History of Political Thought, A: Plato to Marx, 2nd ed.

SUBRATA MUKHERJEE has been a Professor and Head, Department of Political Science, University of Delhi.
SUSHILA RAMASWAMY, Associate Professor, Department of Political Science, Jesus and Mary College, University of Delhi.

This lucidly written text, in its second edition, continues to provide a comprehensive study of the classical political theory tradition from Plato to Marx. The book elucidates the fascinating evolution of the history of political ideas, through the works of thirteen key political thinkers — which includes Plato, Aristotle, Machiavelli, Hegel and Marx.

The text highlights the decline and revival of classical political theory and portrays the clash of universalism vs. localism in the classical tradition. It focuses on the recent interpretations of the classical texts, for instance, feasibility of the ideal State in Plato; civic humanism and republicanism in Machiavelli; the radicalism of Locke, and the contributions to the woman’s cause by John Stuart Mill.

NEW TO THIS EDITION

Inclusion of two important Enlightenment liberal thinkers, Mary Wollstonecraft, the founder of liberal feminism and the other, Immanuel Kant, a de-ontological liberal.

Addition of an Appendix on John Rawls who is credited as a seminal thinker of contemporary times, having played a crucial role in the revival of normative political theory.

The text is intended for the undergraduate and postgraduate students of Political Science in various universities, and for all those who are appearing for the civil services examinations.


Latest Print 2014 / 576 pp. / 16.0 × 24.1 cm

Indian Political Thought

K.S. PADHY, former Professor and Head, Department of Political Science, Berhampur University (Orissa).

Intended as a text for the undergraduate and postgraduate students of political science, and aspirants of civil services this compact book brings to fore the political thought of various Indian thinkers over the decades.

The book begins with a detailed discussion on the political thought of Manu, the lawgiver, whose classification of the different castes and their duties is highlighted. Then it goes on to give a comprehensive account of such thinkers as Kautilya, the author of Arthashastra, who talks about the four stages of life and the duties of the King; Raja Ram Mohan Roy, the religious reformer; Swami Dayananda Saraswati, the Hindu reformer and advocate of the Vedas. Besides, the book deals in detail with such thinkers as Swami Vivekananda, Bal Gangadhar Tilak, Gopal Krishna Gokhale, and Shri Aurobindo.

Further, the book analyzes the political thought of the great Indian leaders — Mahatma Gandhi, the Father of the Nation, whose ideas of Satyagraha, Ahimsa (Non-Violence), Swadeshi, and Swaraj are too well known; Jawaharlal Nehru, the Architect of Modern India and the first Indian Prime Minister whose ideas on socialism, democracy, and planning have guided the nation; the indefatigable JJP (Jaya Prakash Narayan), the pioneer of the socialist movement; and Bhimrao Ambedkar, the Architect of the Indian Constitution — the great social reformer who championed the cause of the downtrodden.

Finally, the book makes an analysis of ideas of other thinkers, such as Sir Sayyed Ahmed Khan, a great advocate of communal harmony, Muhammad Ali Jinnah, Lala Lajpat Rai, the Lion of Punjab and the propounder of Swaraj; and Ram Manohar Lohia, a powerful exponent of socialism.


Latest Print 2013 / 400 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4305-4 / 375.00
Public Finance
2nd ed.

AMBAR GHOSH, Professor of Economics Department, Presidency University, Kolkata. CHANDANA GHOSH, Assistant Professor, Indian Statistical Institute, Kolkata.

The objective of the theory of public finance is to determine the optimal scales of government interventions or expenditures in different areas and the optimum modes of financing these expenditures. The problems that the government handles are extremely complex, and this makes the theory of public finance challenging and exciting at the same time. It is continuously searching for better, more acceptable and easier-to-implement solutions to the problems encountered. This book, in its second edition, continues to build up in detail the major theories of public finance starting from the fundamental principles, and explains how government decisions are taken on the basis of the guidelines yielded by these theories. The new edition is incorporated with updated data throughout, including the newly revised tax slabs.

This book exposes the students to various facets of public finance which develops analytical frameworks to:

- Address the issues of efficient allocation of resources between private, public and mixed goods
- Ensure equitable distribution of tax burden among individuals
- Find ways of minimizing inefficiency of the tax structure
- Study the statutory and economic incidence of different types of taxes
- Examine the implications of government borrowing
- Develop the rationale of distributing economic or fiscal responsibilities and tax powers among different tiers of government.

The book makes the comprehension of the subject easier by developing simple mathematical models to derive the major results in each of the above areas, and by explaining the economic intuition of the results in detail. The concepts are illustrated with the help of simple examples taken from the Indian economy. Moreover, the book assesses India’s economic policies in the light of the theories discussed. Another distinguishing feature of the book is that it contains a large number of review questions and numerical problems on every topic discussed to help the students apply the tools and techniques learnt, and thereby, develop a sound understanding of the subject.

This textbook is designed to serve the needs of undergraduate and postgraduate students of economics for the paper Public Finance/Public Economics.


Latest Print 2014 / 368 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4998-8 / 425.00

Cognitive Neuroscience

NICOLE FIORI is professor of neuroscience at the University of Paris, 5—René Descartes, where she teaches cognitive neuroscience to postgraduate and undergraduate students of psychology.

Few fields of science have seen developments as rapid and as fascinating as cognitive neuroscience. It is therefore essential for students of psychology—who are faced with a field of formidable scientific/technical level—to understand and appreciate their range.

Within the framework of neurosciences and cognitive psychology, cognitive neuroscience addresses the decoding of the cerebral bases of cognitive functioning. It is based on data from experiments carried out on animals, the study of brain-damaged patients, and experiments carried out on humans using methods of brain imaging. It is a recent discipline that is evolving rapidly: the organization and functioning of cerebral neuronal systems underlying cognition remains largely an area that is being discovered and explored. Many of these discoveries are interrelated.

This book is designed to fulfil the growing needs of teachers and students for an introductory textbook. It is largely oriented towards the organization and functioning of cerebral neuronal systems underlying cognition remains largely an area that is being discovered and explored. Many of these discoveries are interrelated. This book is designed to help in the understanding of models of cognitive functioning in terms of perception, memory, language and attention. The text also presents the major principles underlying the methods of brain imaging, points out differences of organization between the male and female brains, and ends with an approach to the themes, at present widely studied, of linkage between emotion and cognition.

This book will be of interest to undergraduate students of psychology, as well as postgraduate students of psychology having specific courses in cognitive psychology, clinical psychology and neuro-psychology.


Latest Print 2010 / 184 pp. / 16.0 x 24.1 cm ISBN-978-81-203-4057-4 / 175.00
This revised and expanded edition is a sequel to the first edition which was warmly received by the student and teaching community for its indepth analysis and refreshing approach to the subject.

Beginning with an introduction to the nature and scope, and the various schools of psychology, the book discusses the systems propounded by Freud, Adler, Jung and Piaget, taking into account their critical importance to the subject. It then focuses on the psychology of growth and development, psychology of individual differences, motivation, attention and personality, with an emphasis on the individual’s attitude towards learning, and the factors influencing learning. The text also elaborates the nature and theories of learning and the aspects of memory such as remembering and forgetting. The cognitive aspect, i.e. intelligence, and vital topics like creativity and the psychology of thinking, reasoning and problem-solving have been accorded due prominence. A detailed discussion on exceptional children and learning disabled children together with the educational measures for overcoming such disabilities is also included. The text concludes with an important aspect of human behaviour, namely, adjustment.

Interspersed with examples, illustrations and tables, this text is ideally suited for postgraduate students of education and psychology. It can also be profitably used by teachers, teacher-educators, guidance and counselling personnel, and administrators of educational institutions.

CONTENTS:
- Educational Psychology—Meaning, Nature and Scope.

Designed as a textbook for undergraduate courses in Educational Psychology, this well-organized study gives a detailed description of key concepts such as learning, intelligence and personality and various contemporary theories governing these. The present volume attempts to provide teachers and prospective teachers with those facts, principles and procedures which are of maximum utility in the classroom situations. Apart from helping the teacher-trainee gain a clearer understanding of the nature and behaviour of the learner, the book also provides assistance in evaluation and in understanding the concept of guidance services. The significance of educational and vocational guidance, particularly of exceptional children, is clearly and forcefully brought out. The text is well illustrated with diagrams to elucidate the concepts discussed.

KEY FEATURES
- The book is child centred and practical in its approach and views Educational Psychology from the stand-point of actual problems faced by class-room teachers.
- A chapter is devoted to elementary statistics.
- Importance of guidance and counselling services is clearly brought out.
- One full chapter is set apart for a discussion on guidance of exceptional children.

CONTENTS:
- Foreword.
- Preface.
- Introduction.
- Growth and Development.
- Learning.
- Intelligence.
- Personality.
- Measurement and Evaluation.
- Elementary Statistics.
- Guidance.
- Organization of Guidance Services.
- Guidance of Exceptional Children.
- References.
- Bibliography.
- Suggested Reading.
- Author Index.
- Subject Index.

Latest Print 2012 / 196 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-0810-7 / £ 175.00
A harmonious blend of the theoretical and practical aspects of educational psychology, this student-friendly text provides a base for the understanding of the subject.

The book discusses the various aspects of growth and development, specifically during childhood and adolescence, and accords due importance to the cognitive aspect of human behaviour with elaborate text on intelligence, creativity, thinking, reasoning and problem-solving.

Besides maintaining a logical progression of topics, the author has interspersed the text with examples and illustrations to provide an in-depth analysis of the subject matter.

The book is ideally suited for the B.Ed. and B.A. (Education) courses but can also be a valuable reference for teachers, teacher-trainees, and practising counsellors at various levels of school education.

CONTENTS:

Latest Print 2014 / 736 pp. / 17.8 × 23.5 cm
Though Psychology is a comparatively 'younger' subject as compared to allied subjects like Philosophy, Anthropology and Sociology, recent years have witnessed remarkable strides in its study. Indeed, writings on the subject have been both prodigious and prolific because of the enormous interest evinced by those interested in psychology and because human behaviour — both complex and simple — is such a fascinating subject for study and research.

This accessible and student-friendly text shows the 'what', 'why', and 'how' of human behavioural patterns. The text emphasizes the controlled and replicable studies to explain such behavioural aspects as sensing, perceiving, modifications of human behaviour, memorizing, the recollection of past events, and affective processes. The text is interspersed with many examples to illustrate the concepts discussed. The concepts are also well supported with experimental as well as observational facts. What's more, the book acquaints the reader with the recent advances made in the field of psychology.

Primarily intended as a text for undergraduate students of psychology, the book can also be profitably used by graduate students and all those who have an abiding interest in the study of human behaviour.
For creating a balance in the organizational environment, harmonization amongst the employees and the employer is a prerequisite. The factors that help determining an organizational balance are the sociology of an environment, psychology of the people working there, channel of communication, and sound and rationalized management. This book underlines the fundamental concepts of Organizational Behaviour, and its application in the Indian organizational scenario.

The book comprises 29 chapters—the concluding chapter devoted to cases from various Indian industry verticals. Chapters 1–3 deal with basics of organizational behaviour, its history and the challenges. Chapters 4–10 are devoted to various aspects of individual behaviour, e.g., perception, personality, learning theories, attitude and motivation theory. Chapters 11 to 16 dwell onto the topic of group behaviour like team dynamics, transactional analysis, leadership, emotional and spiritual intelligence and management of conflicts. Chapters 17 to 28 are largely focused on various aspects of organization, such as its structure, its HR policies, International Organizational Behaviour and Corporate Governance and its role in determining the ethical norms for an organization.

This book is designed for the postgraduate students of Management and Commerce. Besides, it can be beneficial for the managers and executives, to help them tackle Human Resource and organization-related problems.

**KEY FEATURES**

- Every chapter is concluded with a real-life case study
- Appendices added to most of the chapters are interpretation-based Questionnaire to analyze behavioural traits of employees and employers
- Review questions and case study questions to judge students’ comprehension of the subject

**CONTENTS:**

- Preface

Latest Print 2013 / 644 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4696-3 / ` 450.00
Introduction to Psychological Measurement, An

P.V. RAMAMURTI, Professor and Dean of Social and Behavioural Sciences and Honorary Director, Center for Research on Aging, Department of Psychology, SV University, Tirupati.

Primarily intended for undergraduate and postgraduate students of psychology, the book aims to provide a succinct yet reasonably comprehensive account of psychological measurement techniques (psychometry) in a single volume. Written in a lucid style with the author’s rich teaching experience, the book focuses on the technique of development and use of psychological tests and scales. It also describes essential features and steps to be followed in constructing a psychological test.

The book, divided into three parts, covers psychophysical methods, psychological scaling and test methods, and some elementary but essential statistical concepts used in the measurement and interpretation of psychological test data.

Besides psychology students, the book will be useful for undergraduate and postgraduate students of education and professionals in the field of psychology and education.


Latest Print 2014 / 200 pp. / 17.8 × 23.5 cm
Health education plays a pivotal role in creating awareness among the masses, and survey research in public health forms an integral part of the subject. This book is a step-by-step study guide to educate the researchers and the students on how to conduct health surveys and prepare the reports. The book begins with a discussion on health research and its importance. It then moves on to the sensitive, yet most important health research areas like Child Health, Adolescent Health, Women Health, Communicable diseases and Non-communicable diseases, by citing their sample reports. The examples are cited to explain the methods of data collection, research strategies and problem formulation strategies, besides illustrating the methodologies of sample design, analysis design, and field data collection. The book also helps in learning the advanced tools to conduct researches like SPSS statistics software and EpiInfo software. The concluding chapter shows how to write a report skillfully and in an organised manner. The book is intended for the postgraduate students of Public Health, Management, and Social Work.

**Key Features**
- Easy language and simple presentation
- Sample Examples taken from the Real-Life cases
- Chapter-end Questions to judge Students knowledge on the subject

**Contents:**

Latest Print 2013 / 428 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-2088-8 / 295.00
Diversity, inclusivity, and gender mainstreaming have today become the buzzwords in the corporate arena and civil society. The reason is increased business requirement for diverse competencies and skill sets. Hence, the need to have a mixed gender group has become a business imperative. Furthermore, there is heightened awareness that women are equally competent and talented, if not more, than men in various professional jobs. With increasing job opportunities, tapping and retaining this talent through initiation of various programmes within organizations has shown positive results. New Paradigms for Gender Inclusivity: Theory and Best Practices scripts some of the practices, in the form of case studies, which organizations have followed to enhance gender inclusiveness. These real-life case studies highlight the role played by organizations in facilitating the progression of women which indirectly has helped in their growth, development and recognition of being a forerunner in promoting diversity.

The book is divided into three parts. Parts I and III begin with a theoretician’s perspective on gender inclusiveness and gender mainstreaming in India, respectively and close with an academic detailing on reasons and causes for the same. Statistical data and models in the last chapter for the two parts validate the corporate, governmental and civil society attempts at introducing creative yet simple methodologies to make gender diversity and inclusion a reality in the workplace. In Part I, six case studies on the following companies: Broadridge, IBM Daksh, Infosys, Shell India, Jamshedpur Utilities and Services Company Ltd.: A Tata Enterprise, and Wipro have been presented which discuss the need for gender diversity and inclusiveness, drivers and barriers, and showcase measures adopted to overcome those barriers. Five cases: SEWA, Indian Police, Sakti, Indian Railways, and RUDI have been presented in Part III which highlight tasks accomplished by women in their area of expertise, marketing strategies adopted by the civil society to promote goods produced by women, sensitization workshops to address harassment, and training workshops. Part II (Interlude) is a break from organizational cases and shares some experiences, angst, insights and observations on gender diversity and inclusion through a narration, a poem and a reflective piece.

This book on case studies will be extremely useful for postgraduate students pursuing gender studies in Management Institutes, students working on gender related dissertation topics and corporate houses keen to learn from best practices of other organizations. Additionally, it would benefit readers who wish to learn about organizational policies and practices for gender inclusivity.

This well-organised and lucid text on Research Methodology is intended to fulfill the felt-need for an introductory, accessible and student friendly book. Written with the aim of making the teaching and learning of research methods and methodology simple, the book provides theoretical information in an operational manner about the various methods, techniques and procedures followed in research. This book based on the practical experiences of the authors as researchers, practitioners and teachers intends to cater to the needs of students of MBA, BBA, Humanities and Social Sciences. The book will also be of immense use to the researchers, practicing managers and public health organisations.

KEY FEATURES
• Contains case studies and sample questionnaires.
• Covers brief knowledge of statistics and its applications required in research.
• Objective type questions, review questions, sample question papers and previous years’ examination papers have been included for brushing up of the knowledge.
• Gives working knowledge of various useful computer software used in the research analysis such as SPSS, Excel etc.
• Report writing is explained in the systematic manner explaining the process, layout, types, mechanics involved, various principles and precautions to be taken while writing a good report to make the research worth.


Latest Print 2013 / 224 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4381-8 / 225.00

HUMANITIES AND SOCIAL SCIENCES
Sociology (RESEARCH METHODOLOGY)

This comprehensive text designed for MBA, MCom, MA (Economics), MA (Sociology) and PhD (Management, Commerce, Economics, and Engineering) courses continues to give complete account of concepts and statistical tools of research methodology in its Second Edition. The textbook also serves as a reference for consultants to carryout projects/consultancies in industries or service organizations.

DISTINGUISHING FEATURES OF THE BOOK
• Written in an easy to read style
• Each technique is illustrated with sufficient number of numerical examples
• Gives complete account of statistics and aspects of research methodology
• Chapter 8 gives complete account of testing of hypotheses
• Design and analysis of experiments, advanced multivariate analysis, multidimensional scaling and conjoint analysis, algorithmic research, models for industries and public systems, simulation are unique to this text.
• Graded chapter-end questions

NEW TO THIS EDITION
Introduction of a chapter on SPSS (Chapter 17), is new to this edition which gives readers an idea to obtain statistics for different techniques presented in this text. The different screenshots for different modules of SPSS applied to suitable example problems on sample session for data creation, reports, descriptive statistics, tables, compare means, general linear model, correlation, simple regression, non-parametric tests, classify, data reduction and graphs help readers to understand standard features of SPSS.


Latest Print 2014 / 716 pp. / 16.0 × 24.1 cm
Research Methodology: A Guide for Researchers in Management and Social Sciences

BILL TAYLOR, Formerly a Principal Lecturer at Sheffield Business School (UK).
GAUTAM SINHA, Professor, Vinod Gupta School of Management and Professor-in-Charge (Training and Placement) at Indian Institute of Technology Kharagpur.
TAPOSH GHOSHAL, Assistant General Manager (Academic), Management Training Institute, SAIL, Ranchi.

Intended to serve as a text for postgraduate students of commerce, management, and social sciences, and especially for the first-time researchers, this well-organized book deals with the variety of research methods used in management and social sciences. It offers readers practical guidelines for research and directs them through all the stages of research—from identifying a viable research project to the submission of a dissertation, report, or research article. The text identifies three dimensions of research methodology—research strategies, research methods and research data.

KEY FEATURES

• Many real-world examples extracted from actual research projects of students will help the readers develop their research skills.
• Due attention is given to both quantitative and qualitative research methodologies in order to help readers make informed choices about methods.
• Statistical appendices are provided to acquaint readers with the underlying mathematical concepts involved in the research methods discussed.


Latest Print 2014 / 240 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-2991-1 / 250.00

Statistics for Social Sciences (with SPSS Applications)

HARI SHANKAR ASTHANA, Reader, Department of Psychology at Kumaun University, Nainital (Almora Campus), Uttarakhand.
BRAJ BHUSHAN, Assistant Professor, Department of Humanities and Social Sciences, Indian Institute of Technology Kanpur.

Designed as a text for the undergraduate and postgraduate students of psychology, education, sociology, demography and economics, this comprehensive book explains the theoretical and computational aspects of statistics. Since the students of social sciences often find it difficult to comprehend easily the statistical techniques due to complex mathematical steps involved, this book explains the concepts as well as steps in a simple and clear manner. The text provides solutions to basic concepts and problems using a number of illustrations. In addition, it demonstrates the simplest way of using SPSS software for statistical analysis.

SPSS screen images are used to make the ideas clearer for the readers. This is preceded by theoretical details and solved examples so that even readers having minimal knowledge of computer can use SPSS easily and comprehend the complex intermediate steps involved in statistical analysis. Besides the undergraduate and postgraduate students of social sciences, researchers in the field of social sciences should find this book immensely useful.

KEY FEATURES

• Demonstrates the simplest way of using SPSS for statistical analysis.
• Provides solved examples throughout the text in ascending order of complexity.
• Gives chapter-end exercises and key terms for better grasp of the topics covered.


Latest Print 2007 / 224 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3199-0 / 195.00
PHILIPPE SCIEUR is a professor of Sociology at the FUCaM (Facultés universitaires catholiques de Mons/Catholic university of Mons) and Director of CeRIO (Centre de Recherche et d’Intervention en Organisation). His works cover the social regulations and organised collective action mainly within the areas of public-private partner-ship, as well as SMEs, public administrations and the third sector.

This book, in its second edition, continues to present the main models of Sociology that have been conceptualised to apprehend the world of organisations. From the theories of bureaucracy and human relations to contemporary approaches, this book focuses on all the key aspects of Sociology of an organisation. The concepts defined are marked by the consideration of modes of rationality, types of cooperation, of networks and power games, of systems of decision-making and logics of action.

The book cites the contributions made and the definitions given by the great Sociologists like Max Weber, Talcott Parsons, Michel Crozier, Renaud Sainsanlieu, to help the students understand the topics more clearly. This second edition is enriched with studies of discussed cases, charts, and of extracts of texts pertinent to the productive system, to the public sphere and the associative fact. The book is intended for the undergraduate students of sociology. It will also be of interest to those who, on a personal or professional level, wish to understand better how companies, administrations, etc. function.


Latest Print 2012 / 160 pp. / 16.0 × 24.1 cm ISBN-978-81-203-4530-0 / ₹ 175.00

K.K. CHATTOPADHYAY, Reader, Department of Physics, Jadavpur University.
A.N. BANERJEE, Research Faculty, Department of Aerospace Engineering Sciences, University of Colorado at Boulder, USA.

This compact introductory textbook in the emerging discipline of nanoscience and nanotechnology, presents the fundamental principles and techniques to students of science and engineering. The book presents the information in a pedagogically sound manner, and is especially designed for students of M.Sc. (Physics) and M.Tech. courses in nanotechnology.

With the increasing applications of nanoscience and nanotechnology in the areas of biotechnology, electronics, integrated circuits, chemistry, physics, materials science, etc. the study of nanostructured materials is also becoming a core part of undergraduate and postgraduate courses of many science and engineering disciplines. The book emphasizes the underlying concepts of nanomaterials with neatly drawn diagrams and illustrations. Modern applications are included to highlight the relevance and importance of nanoscience and nanotechnology in everyday life. The book should therefore be of interest to students of several disciplines of science and engineering as well as research scholars.


Latest Print 2014 / 276 pp. / 17.8 × 23.5 cm ISBN-978-81-203-3608-7 / ₹ 375.00
Rich in protein, pulses or grain legumes form a very important source of food. The problem of malnutrition and inadequate supply of protein poses a gigantic task to increase pulse production in many countries. This comprehensive book has been designed to provide sequential development and generation of information in science and technology of growing pulse crops. It aims to equip the students and researchers with the knowledge of research results to put those into practice for higher crop production.

The book presents the varied principles and technologies available in growing pulse crops in different states of India. It provides introductory knowledge of the basics of pulse production, factors limiting production, trends of research in India and the importance of pulses in human nutrition. All together, it covers 15 pulses, each one in a separate chapter. All the pulses have been elaborately discussed based on advanced research results beginning with climate and soil requirements, seedbed preparation, technologies related to sowing, manuring and fertilizer use, water management, cropping systems, weed management and crop protection. In addition, each chapter ends with a good number of references followed by a question bank.

Primarily designed for the undergraduate and post-graduate students of agriculture, the book will also be beneficial to teachers, scientists, scholars and extension agencies in agriculture.


Latest Print 2011 / 572 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4176-0 / ₹ 495.00

Agricultural biotechnology plays a significant role in developing agriculturally important crops that provide high yield with enhanced nutritional value and show improved resistance to pathogens. This book, a collaborative endeavour involving contributions from renowned academics from India and abroad, discusses the techniques of plant tissue culture, the fundamental basis for the development of innovative crop improvement strategies, and emerging paradigms in plant genome research.

The book describes the benefits of the production and use of biofertilizers and biopesticides to overcome hazardous effects of chemical fertilizers and pesticides. It explains the importance of microbes in bioremediation and the methods of biomonitoring to target contaminants. Besides, coverage also includes the topics on bioinformatics in agriculture, biodiversity, bioethics, and agricultural pollution.

This text is suitable for the undergraduate and postgraduate students of agriculture and biotechnology. It will also be useful to researchers and agronomists.


Latest Print 2008 / 276 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3592-9 / ₹ 225.00
Aquaculture, farming of aquatic animals and plants, is one of the world's fastest growing food production systems. This text provides an excellent elucidation of the concepts of aquaculture along with its impact on the environment.

Written in a style that makes the subject both interesting to read and easy to understand, this text describes the scope and principles of aquaculture, and the design and management of a typical aquaculture/fish farming. It explains different types of culture systems and practices, as well as different criteria for the selection of species for culture. The text discusses some common diseases in aquaculture and measures to prevent them. It further elaborates the importance of a balanced diet for aquatic species and focuses on harvesting and post-harvesting technology.

This book discusses in detail the role of biotechnology in aquaculture. In addition, it deals with different aquaculture practices in India, such as culture of carp, prawn, pearl and seaweed. The text concludes with a discussion on the effects of aquaculture practices on the environment.

KEY FEATURES

- Provides a list of major important aquaculture species cultured worldwide.
- Presents the latest data to enhance the utility of the text.
- Gives special emphasis on aquaculture practices in India.

The book is intended for undergraduate and postgraduate students of zoology (B.Sc. and M.Sc.) and fisheries (B.F.Sc. and M.F.Sc.). It will also be useful to aquaculturists and environmentalists.


Latest Print 2009 / 352 pp. / 17.8 × 23.5 cm

Agricultural Meteorology

G.S.L.H.V. PRASADA RAO, Professor and Head, Department of Agricultural Meteorology, College of Horticulture, Kerala Agricultural University (KAU), Vellanikkanam, Thrissur, Kerala.

Designed as a textbook for undergraduate and post-graduate students of agriculture, it fulfills the need for an up-to-date comprehensive information (as per the syllabus framed by ICAR) on the theoretical and applied aspects of agricultural meteorology.

Illustrated with graphs, schematic representations, photographs and pictures, the scope of the book is divided into three major areas of study:

1. Discusses the basic aspects of agricultural meteorology; introduces the principal meteorological variables (with emphasis on radiation and temperature) that govern the atmosphere and highlights the causal factors leading to the global and local weather and climate variations like atmospheric pressure and winds, clouds, monsoon and precipitation.
2. Addresses the effects of weather on various crops and discusses applications of Hopkins's bioclimatic law to mitigate the ill effects of weather on crop production; explains agroclimatic classification and discusses droughts and their management strategy with special reference to crops.
3. Deals with various types of weather forecasting and their techniques including weather service to farmers; explains crop growth simulation modelling—a newly emerging area in agricultural meteorology; focuses on influence of weather in relation to pest and disease outbreaks, discusses climate change and provides introduction to remote sensing.

A special feature of the book is that it contains many indigenous examples related to the humid tropics. In addition, the book has many plates and information on basic and sophisticated meteorological equipment.

A variety of chapter-end questions help develop students’ understanding of salient concepts and makes the material presented more meaningful.


Latest Print 2014 / 384 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3338-3 / 325.00
Global warming has led to climate change which in turn has led to frequent occurrence of floods, droughts, and cold and heat waves, affecting the productivity of food grain in a large measure. This book studies the effects of regional climate change on the agriculture sector in different states of India. The book also discusses the impact of global warming on the agriculture sector across the world and describes in particular how climate change/variability is affecting rainfall, temperature and land in various states of India. It also suggests adaptation techniques which can be evolved to neutralize the adverse effects of climate change. Besides, the text explains the need for weather risk management, agromet advisory services, weather insurance, and the principles and practices of integrated watershed management through a consortium of approaches for mitigating the adverse impact of climate change in the semi-arid tropics. This book, with contributions from experts in the field and edited by academics who are authority on the subject, should prove to be extremely useful to undergraduate and postgraduate students of Agriculture, planners, policy makers and administrators.


This book is about the study of microbes and the fundamental aspects of microorganisms and their relationship to agriculture. Designed for undergraduate and postgraduate students of agriculture and biology, this basic and well illustrated text provides a comprehensive presentation of microorganisms.

The book begins with some basic information on microorganisms including methods of study and classification. It then goes on to describe their morphology, physiology, biochemistry and genetics. A discussion on soil microorganisms along with pathogenic forms and their effect on plants is also given. The text concludes with a fairly detailed account of microbial biotechnology which covers most of the recent advances in the area.

This is the second edition of the author’s highly successful earlier edition for which Dr. Selman A. Waksman, discoverer of Streptomycin, wrote the Foreword. The author worked with this Nobel Laureate at Rutgers State University.


Latest Print 2013 / 440 pp. / 16.0 × 24.1 cm

Latest Print 2010 / 352 pp. / 17.8 × 23.5 cm

PHI Learning: Publications
Agriculture (Nematology)

Methods and Techniques in Plant Nematology

N.G. RAVICHANDRA, Associate Professor in the Department of Plant Pathology, University of Agricultural Sciences, Gandhi Krishi Vignana Kendra, Bangalore.

Covering the syllabus prescribed by the Indian Council of Agricultural Research (ICAR), New Delhi, this book deals with a wide range of practical methods and techniques used in Plant Nematology. It has been designed specially to fulfill the needs of both undergraduate and postgraduate students of Agricultural and Horticultural Universities. It includes both basic and applied aspects of Plant Nematology.

Besides UG and PG students, this book will serve the needs of research scholars and scientists engaged in the field of Plant Nematology, Plant Pathology, Soil Microbiology and Entomology. It will also be useful to the officials/field personnel of the agricultural and horticultural departments and others concerned with plant protection.

CONTENTS:

Latest Print 2010 / 616 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4096-1 / ₹ 495.00

Agriculture (Plant Breeding)

Essentials of Plant Breeding

K.V. MOHANAN, Professor of Genetics and Plant Breeding in the Department of Botany, University of Calicut, Kerala.

Essentials of Plant Breeding provides comprehensive coverage of principles and practices used in plant breeding. Covering basic concepts of genetics and conventional methods, the book discusses all modern methods and advance techniques of plant breeding. It also deals with the pest and disease resistance, quality improvement, heterosis breeding, ideotype breeding, etc. The book has a special mention on variety release, seed certification, Intellectual Property Rights (IPR) and sustainable agriculture.

The present book is primarily intended for the undergraduate students of agricultural sciences and botany. The book is also useful for the postgraduate students of botany and plant science.


Latest Print 2010 / 168 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3968-2 / ₹ 125.00
This comprehensive book provides a detailed account of the plant breeding methodology, covering particularly pre- and post-Green Revolution era. It elaborates on plant breeding and gene manipulation, utilization of self-incompatibility in developing hybrids, different plant breeding methods for development of crop varieties and hybrids in self- and cross-pollinated crops, nature of gene action and genotype—environment interaction. The text discusses gene manipulation in the crop plant and transfer of genes from wild species to cultivated crops, application of biotechnology in plant breeding, and genetic engineering and transgenic molecular markers as breeding tools and their limitations. It concludes with a discussion on physiologic breeding approach and new plant ideotype concepts which are an emerging area of interest in plant breeding research.

The book will be of immense use to undergraduate and postgraduate students of Agricultural Sciences and Botany for their course study. Besides, research scholars and professionals will also find the book as an excellent source of reference.


Latest Print 2014 / 704 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4850-9 / 695.00

PHI Learning: Publications
This up-to-date text is designed to provide information to the readers on all important aspects of plant pathology in a single volume. The information on modern areas like Disease diagnosis, Disease forecasting, Biological control, Epidemiology and Biotechnology in disease resistance and safe use of pesticides have been covered, giving most recent concepts. The text is illustrated with flow diagrams, line diagrams, photographs and tables for quick and easy understanding of the subject.

Intended primarily as a textbook for undergraduate and postgraduate students of biology and agriculture, this book would also be useful for researchers, practitioners, and agribusiness consultants.

CONTENTS:

This book is based on the syllabus prescribed by the Indian Council of Agricultural Research, New Delhi, for the first and second year undergraduate students of plant pathology in State Agricultural and Horticultural Universities and hence, is of special importance to these students.

The text, conveniently divided into 13 chapters, deals with fundamental aspects of plant pathology viz., scope and objectives, importance of plant diseases, history and development of plant pathology, theory of plant diseases, causes of plant diseases (biotic, abiotic and plant viruses with representative examples) symptoms, general characteristics of plant pathogens, classification of phytopathogens, growth and reproduction of plant pathogens including replication of plant viruses, liberation or dispersal of plant pathogens, their survival and types of parasitism and variability in plant pathogens. At the end of each chapter, important questions have been provided for the benefit of the students. Diagrams, convincing tables and suitable graphs/illustrations are furnished at appropriate places. A complete bibliography and apt subject index are appended at the end.

Besides undergraduate students, this book will also serve as a basic guide to meet the requirement of teachers/researchers in plant pathology and related fields.

Irrigation Water Management: Principles and Practice, 2nd ed.

DILIP KUMAR MAJUMDAR, formerly Professor of Agronomy and Principal (Dean), Institute of Agriculture, Visva-Bharati University, Santiniketan.

The book, now in its second edition, fulfills the need for an up-to-date comprehensive text on irrigation water management for students of agriculture both at the undergraduate and postgraduate levels. The scope of the book makes it a useful reference for courses in agricultural engineering, agronomy, soil science, agricultural physics and environmental sciences. It can also serve as a valuable guidebook to persons working with farming communities.

The coverage in sixteen chapters brings out different aspects of irrigation including irrigation situation in the world, rainfall, evaporation, water wealth and progressive development of irrigation in India, measurement of soil water and irrigation water, methods of irrigation, irrigation with saline water, formulating cropping pattern in irrigated area and management of high water table.

In the second edition, a new chapter on 'On-farm Irrigation System' has been included and a few chapters have been updated to include latest development. The book has useful research data and a large number of diagrams for easy comprehension of the topics. The end-of-chapter problems and numerous worked-out examples serve to aid further understanding of the subject. The book also contains an extensive glossary.


Textbook of Biochemistry and Human Biology, 3rd ed.

Edited by G.P. TALWAR, Director, Talwar Research Foundation, New Delhi. Formerly: Director, National Institute of Immunology, New Delhi; Professor and Head, Department of Biochemistry, All India Institute of Medical Sciences, New Delhi. L.M. SRIVASTAVA, Senior Consultant and Head, Department of Biochemistry, Sir Ganga Ram Hospital, New Delhi. Formerly, Professor and Head, Department of Biochemistry, A.I.I.M.S., New Delhi.

Substantially revised and updated, this book provides a comprehensive coverage of biochemistry in the overall context of body function (and dysfunction). Arranged in 17 sections, it begins appropriately with a section on Chemical Architecture of the Living Systems and then goes on to consider a diversity of fields with membranes and receptors, endorphins and encephalins and prostaglandins at one end of the spectrum to such topics as biochemistry of common intestinal parasites, protein-calorie malnutrition and principles of chemotherapy at the other end.

The book is intended to be a basic text for the medical student not only during preclinical years when the subject is taught, but also during para and clinical years. Being a handbook of basic information, it will also be useful to students of human biology and biochemistry.


Latest Print 2014 / 572 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4826-4 / ₹ 450.00

Latest Print 2012 / 1328 pp. (Hard Cover) / 17.8 × 23.5 cm

PHI Learning: Publications
S. SHANMUGAM, Assistant Professor in the Department of Biotechnology, Kumaraguru College of Technology, Coimbatore.
T. SATHISH KUMAR, Senior Lecturer in the Department of Biotechnology, Kumaraguru College of Technology, Coimbatore.
K. PANNEER SELVAM, Associate Professor in the Department of Microbiology, Dr. G.R. Damodaran College of Science, Coimbatore.

This systematically designed laboratory handbook elucidates a number of techniques which help the students carry out various experiments in the field of biochemistry. The experimental protocols described in the handbook have been standardized and performed in the authors’ own laboratory.

This handbook is intended for the undergraduate and postgraduate students of life sciences (biochemistry, microbiology, biotechnology, plant biotechnology, animal biotechnology, etc.) and engineering (biotechnology, biomedical, etc.) for their laboratory courses. Researchers have to refer to many journals and books to find the right procedure for their experiments. This handbook is an attempt to provide students with the often used methods in a handy format, including explanations of principles, procedures and interpretations of results of the experiments.


Latest Print 2010 / 152 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4103-6 / 150.00
S.P. SINGH, Professor, Department of Human Biology, Punjabi University, Patiala.

PROMILA MEHTA, Professor, Department of Human Biology, Punjabi University, Patiala.

A perfect body is desired by every human being. Be it in terms of height, weight or mass—the increased awakening to stay fit and to be in shape has led to an urge to be familiar with the human anatomy and its measurements.

A compendium of numerous conceptual issues on human body physique, body composition and nutritional status, this book comprehensively discusses various protocols for measuring human body parts. The emphasis is laid on the recommendations made by International Biological Programme (IBP) on Human Adaptability.

In addition, the book effectively reveals subtle differences between those individuals who otherwise look similar through various somatotyping techniques (like Heath and Carter). The book also explains how body measurements determine the growth and development of a child; and factors like chronic illnesses, and obesity in an adult.

KEY FEATURES
• Solved examples to provide an analytical insight on the subject
• Figures and tables to present a lucid picture of all the concepts
• Review questions to test students’ aptitude on the subject

Designed primarily for the postgraduate students of Human Biology, Human Genetics, Anthropology, Physical Education and Sports Sciences, this book is equally beneficial for the physical instructors.

CONTENTS:

Latest Print 2009 / 264 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3863-0 / ₹ 250.00

Introduction to Biostatistics and Research Methods, 5th ed.

P.S.S. SUNDAR RAO, University of California at Berkeley; Dr. P.H. (Biostatistics), Columbia University, New York, is presently the Research Coordinator at the Leprosy Mission Trust India, New Delhi.

J. RICHARD, Australian National University, Canberra] is presently Consultant in Biostatistics and Research Methods.

The last decade has produced many textbooks on Biostatistics, with varying emphasis and degrees of mathematical complexity. This book has stood the test of time and continues to enjoy wide acceptance among students of all health and allied professions, other students and even qualified health investigators, who find it practical, simple and yet precise.

This fully updated and thoroughly revised Fifth Edition, while retaining the fundamental concepts, acquaints the reader with the advances in the subject. The book explains the concepts involved in arriving at the sample size and also a quick solution to the estimation of sample size. Survival analysis and log-rank test are illustrated with examples. The essentials of Chi square tests are simplified and presented. Two-way analysis of variance (ANOVA) is explained with two examples, with and without interaction term. The chapters on Research Methods, Interventional Studies and Observational Studies provide step-by-step guide to plan and carry out quality research. Questions given in each chapter will help the learner to gauge the level of understanding of the principles and applications. Clues to the use of computer packages are provided whenever necessary.

Intended for undergraduate and postgraduate medical students as well as for nursing and paramedical students, the book will also be immensely useful to medical/health faculty and researchers in the field of Biostatistics.


Latest Print 2012 / 280 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4520-1 / ₹ 275.00
Taxonomy is one of the oldest biological disciplines. This book presents an account of general principles and aims of taxonomy in a comprehensive manner. It has been written mainly to cater the needs of undergraduate students pursuing courses in Botany/Life Sciences, but it will be useful for postgraduate students of these disciplines as well.

The book gives a critical account of the important systems of classification and salient features of the APG II (Angiosperm Phylogeny Group, 2003) system of plant taxonomy. It mentions the important rules of plant nomenclature, and various codes of nomenclature including the latest Vienna Code of 2006. Further, it discusses the usefulness of anatomy, embryology, palynology, chemistry, cytology, and ecology under current trends in plant taxonomy. A thorough coverage of profusely illustrated 50 important dicotyledonous and monocotyledonous angiospermic families is the hallmark of this book. Each family is described covering the following points: Distribution, vegetative features, floral description, morphological nature of organs, further classification, affinities with other families, economic importance and description of common plant(s). Finally, the book covers the different aspects and theories related to the origin of angiosperms, and elucidates the methods and techniques of herbarium development and maintenance.

KEY FEATURES
- Presents a key to families described in the book.
- Provides a proforma for the description of angiosperms.
- Includes a glossary of important technical terms.
- Lists the important Herbaria of India and the world.


Latest Print 2010 / 504 pp. / 17.8 x 23.5 cm

B.K. VERMA, Former Professor and Head Department of Botany, University of Allahabad.
This comprehensive and accessible text discusses all the topics prescribed for the students of Life Sciences taking the National Eligibility Test (NET). Besides, the book would also be useful for undergraduate and postgraduate students of Biotechnology, and postgraduate students of Botany and Zoology.

The book discusses spectroscopy which forms the core of modern research, be it physical sciences or life sciences, and microscopy, which is now an indispensable analytical tool in Biological Science, with all its different forms. It also illustrates radioactivity and related phenomena so as to justify their widespread applications in modern biological, medical and chemical researches. The book evaluates the role of statistics in biological as well as physiological/medical phenomena, and systematically analyses electrophysiological methods, histochemical and immuno techniques, and molecular biology.


Latest Print 2011 / 696 pp. / 17.8 x 23.5 cm

This comprehensive and well-written text provides thorough understanding of the principles and applications of cytogenetics and genetics in an easy-to-understand style.

The text is divided into Four parts. Part I on Principles of Cytogenetics deals with evolution and structure of cell, cell division and change, and structure of genetic material. Part II on Principles of Genetics provides detailed discussions on transmission, distribution and arrangement of genetic material, and evolution of species. Part III which is on Molecular Genetics discusses functions of genetic material including biotechnology and genetic engineering, and the last Part IV on Quantitative Genetics deliberates on the course of genetic material in populations.

A historical approach to the subject has also been presented to show the continuity and progress.

The book is eminently suitable for undergraduate and postgraduate students of botany, agriculture, zoology and biotechnology for courses in genetics/genetics and cytogenetics. In addition, the book would also be useful to students appearing in different competitive examinations.


Latest Print 2010 / 672 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4033-6 / 495.00

PHI Learning: Publications
Agricultural Microbiology, 2nd ed.

G. RANGASWAMI, Formerly, Adviser, Planning Commission; Director, Central Staff College for Agriculture, Hyderabad; and Vice-Chancellor, Tamil Nadu Agricultural University, Coimbatore.

This book is about the study of microbes and the fundamental aspects of microorganisms and their relationship to agriculture. Designed for undergraduate and postgraduate students of agriculture and biology, this basic and well illustrated text provides a comprehensive presentation of microorganisms.

The book begins with some basic information on microorganisms including methods of study and classification. It then goes on to describe their morphology, physiology, biochemistry and genetics. A discussion on soil microorganisms along with pathogenic forms and their effect on plants is also given. The text concludes with a fairly detailed account of microbial biotechnology which covers most of the recent advances in the area.

This is the second edition of the author’s highly successful earlier edition for which Dr. Selman A. Waksman, discoverer of Streptomycin, write the Foreword. The author worked with this Nobel Laureate at Rutgers State University.

CONTENTS:

- Preface
- Isolation of Genomic DNA from Gram Negative, Gram Positive Bacteria, Blood and Mammalian Tissue
- Isolation of Plasmid DNA from Gram Negative and Gram Positive Bacteria
- Isolation of RNA from Bacteria and Cultured Mammalian Cells
- Estimation of Nucleic Acids
- Restriction Digestion and Ligation of DNA
- Polymerase Chain Reaction and Randomly Amplified Polymorphic DNA
- Electrophoresis of Nucleic Acids
- Slot Lysis Agarose Gel Electrophoresis
- Purification of DNA from Agarose and Polyacrylamide Gels
- Transformation of Gram Negative and Gram Positive Bacteria with Plasmid DNA
- Estimation of Proteins
- Sodium Dodecyl Sulphate Polyacrylamide Gel Electrophoresis for Proteins
- β-Galactosidase Assay
- Transduction of Plasmid DNA Using CP-51 and CP-54 Bacteriophages
- Bacterial Conjugation
- Blotting Techniques
- ³²P Labelled Probe Preparation and Measurement of Radioactivity in Radiolabelled Nucleic Acid
- Hybridization Techniques

Latest Print 2013 / 440 pp. / 16.0 × 24.1 cm

S. JOHN VENNISON, Lecturer in the Department of Biotechnology, Anna University, Tiruchirappalli.

This systematically designed laboratory manual elucidates a number of techniques which help the students carry out various experiments in the field of genetic engineering.

The book explains the methods for the isolation of DNA and RNA as well as electrophoresis techniques for DNA, RNA and proteins. It discusses DNA manipulation by restriction digestion and construction of recombinant DNA by ligation. Besides, the book focuses on various methodologies for DNA transformation and molecular hybridization. While discussing all these techniques, the book puts emphasis on important techniques such as DNA isolation from Gram positive bacteria including Bacillus sp., the slot-lysis electrophoresis technique which is useful in DNA profile analysis of both Gram negative and positive bacteria, plasmid transduction in Bacillus sp., and the conjugal transfer of plasmid DNA in cyanobacteria, Bacillus and Agrobacterium tumefaciens.

This book is intended for the undergraduate and postgraduate students of biotechnology for their laboratory courses in genetic engineering. Besides, it will be useful for the students specializing in genetic engineering, molecular biology and molecular microbiology.

CONTENTS:

- Preface
- Isolation of Genomic DNA from Gram Negative, Gram Positive Bacteria, Blood and Mammalian Tissue
- Isolation of Plasmid DNA from Gram Negative and Gram Positive Bacteria
- Isolation of RNA from Bacteria and Cultured Mammalian Cells
- Estimation of Nucleic Acids
- Restriction Digestion and Ligation of DNA
- Polymerase Chain Reaction and Randomly Amplified Polymorphic DNA
- Electrophoresis of Nucleic Acids
- Slot Lysis Agarose Gel Electrophoresis

Latest Print 2009 / 140 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3814-2 / 125.00
SCIENCE AND MATHEMATICS

Biology (MICROBIOLOGY)

Introduction to Microbiology

A.S. RAO, Former Professor, Nagarjuna University, Guntur.

The book brings together information on the widest range of topics in microbiology in a single source. Written in a concise manner and ideally suited for students and teachers at colleges, this book discusses microbiology in sufficient depth. Elaborate illustrations are provided for easy understanding of the subject. The text includes immunology, biology and infectious disease principles.

KEY FEATURES

• Covers fundamental principles and main applications of microorganisms in an organised manner.
• Presents an intelligible survey of microorganisms and detailed structure of bacteria as well as a brief consideration of their classification.
• Discusses features, classification and importance of viruses.
• Provides basic information on bacterial metabolism, genetics and immunology. Also covers environmental aspects and infectious diseases.
• Illustrates details of chemical structures and metabolic pathways.
• Explains basic principles of microbial genetics and immunology in simple terms with suitable illustrations.

CONTENTS:


Latest Print 2009 / 216 pp. / 16.0 x 24.1 cm

Mushrooms: A Manual for Cultivation

SUBRATA BISWAS, Senior Scientist (Plant Pathology), ICAR Research Complex, NEH Region, Tripura Centre, Lembucherra, Tripura.
M. DATTA, Joint Director, ICAR Research Complex, NEH Region, Tripura Centre, Lembucherra, Tripura.
S.V. NGACHAN, Director, ICAR Research Complex for NEH Region, Umiam, Meghalaya.

Mushroom is an important crop of fungal origin that can be cultivated on several agricultural residues. There are about twenty mushroom species grown commercially all over the world, specifically known for their attractive flavours and textures that make food delicious. Mushrooms not only contain protein, vitamins and minerals, but also have low calorie content with little fat and sugar. They provide a high amount of qualitative nutrition required for our growth and strong immune system.

This is a complete manual on the cultivated edible mushrooms covering all the information from their morphological features to post-harvest preparations. The structure, natural diversity, food and medicinal values, impact of climatic factors on their cultivation and cultivation methodologies are all explained in an easy-to-understand way. The economics of mushroom cultivation and ancillary information about mushroom centres, sources of spawn and machineries as well as addresses of leading mushroom farms and exporters have been elaborated in the text.

The text is intended for the undergraduate students of Agriculture, Biotechnology, Botany and Microbiology. Besides, it will serve as a handy compendium for those engaged in mushroom development programmes as well as those interested in establishing their own mushroom farms.

CONTENTS:


Latest Print 2012 / 220 pp. / 17.8 x 23.5 cm

PHI Learning: Publications
K.V. CHAITANYA is an Associate Professor in the Department of Biotechnology at GITAM University, Visakhapatnam.

This laboratory guide, intended for undergraduate and postgraduate students, includes techniques and their protocols ranging from microscopy to in vitro protein synthesis. Experiments relating to chromosomes study and identifying the phases of cell division are explained. The book lucidly deals with the extraction and characterization of chromatin and techniques for studying its modifications, the methodology for isolation of nucleic acids from all types of organisms, such as viruses, fungi, plants and animals. All the protocols have been explained following step-by-step method. Different types of electrophoresis and their techniques, including, blotting techniques and the methodology for stripping of probes from membranes for reusing the blot, have also been dealt with. Protocols on modern molecular biology techniques—PCR, restriction enzyme digest, DNA isolation, cloning and DNA sequencing—add weightage to the book. It also gives necessary knowledge of different types of stains, staining techniques, buffers, reagents and media used in the protocols.

To help students prepare for answering viva voce questions, the book includes MCQs based on the discussed techniques.

N.G. RAVICHANDRA, Associate Professor, AICRP (Nematodes), Department of Plant Pathology, UAS, GKVK, Bangalore.

This book is based on the syllabus prescribed by the Indian Council of Agricultural Research, New Delhi, for the first and second year undergraduate students of plant pathology in State Agricultural and Horticultural Universities and hence, is of special importance to these students.

The text, conveniently divided into 13 chapters, deals with fundamental aspects of plant pathology viz., scope and objectives, importance of plant diseases, history and development of plant pathology, theory of plant diseases, causes of plant diseases (biotic, abiotic and plant viruses with representative examples) symptoms, general characteristics of plant pathogens, classification of phytopathogens, growth and reproduction of plant pathogens including replication of plant viruses, liberation or dispersal of plant pathogens, their survival and types of parasitism and variability in plant pathogens. At the end of each chapter, important questions have been provided for the benefit of the students. Diagrams, convincing tables and suitable graphs/illustrations are furnished at appropriate places. A complete bibliography and apt subject index are appended at the end.

Besides undergraduate students, this book will also serve as a basic guide to meet the requirement of teachers/researchers in plant pathology and related fields.

CONTENTS:
- Foreword
- Preface
- Acknowledgements
- Introduction
- Scope and Objectives of Plant Pathology
- Importance of Plant Diseases
- History and Development of Plant Pathology
- Definition and Concept of Plant Diseases
- Causes of Plant Diseases
- Symptoms of Plant Diseases
- General Characteristics of Plant Pathogens
- Classification of Plant Pathogens
- Growth and Reproduction of Plant Pathogens
- Replication of Plant Viruses
- Infection Process and Survival of Plant Pathogens
- Dispersal of Plant Pathogens
- Parasitism and Variability in Plant Pathogens
- Glossary
- Bibliography
- Index

Latest Print 2013 / 652 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4703-8 / 495.00

VITTAL R. SRINIVAS, was a Project Officer in the Department of Biotechnology, Indian Institute of Technology Madras.

This text not only deals with the basic concepts but it also emphasizes the technical and practical aspects of the subject. It covers the computational tools in bioinformatics, algorithmic aspects as well as technological aspects.

Besides it gives a clear exposition of Viterbi algorithm, Hidden Markov models, UPGMA, FM algorithm, heuristic, developing and using substitution matrices, HMMs and derivation of a number of standard formulae in information theory and statistics.

Finally the text focuses on the technological aspects of bioinformatics such as sequencing through shot gun methods, microarrays, with a variety of unsupervised methods in data analysis with examples, as well as interdisciplinary research in systems biology.

The book is primarily intended as a text for the students of Computer Science, Information Technology, undergraduate students of Bioinformatics, PGDCA and biological sciences and biotechnology. It should also be of considerable interest for research scientist in Chemistry and Pharmacy.

CONTENTS:
- List of Figures
- List of Tables
- Preface
- Acknowledgements
- Prologue
- Introduction
- Part I: Introduction to Bioinformatics—Getting Started with Linux
- Part II: Programming, Database Management and Information Theory—World Wide Web, Perl and Java
- Information Theory
- Part III: Sequence Databases and Sequence Analysis—National Center for Biotechnology Information (NCBI), Blast and Fasta: A Search for Similarity
- Part IV: Multiple Sequence Alignment, Phylogenetic Analysis and Gene Prediction—Pairwise Sequence Alignment and Dynamic Programming, Phylogeny, Gene Prediction
- Part V: Protein Databases, Protein Domain Searching, and Structure Prediction—Protein Data Bank (PDB), Domain Assignment and Searching, Native Structure Prediction and Protein Folding Prediction
- Part VI: Sequencing & Genome Mapping—Genome Sequencing, Maps
- Public Domain Databases and Analysis Tools: A Compendium
- Model Questions
- Appendix: Fundamentals of Probability
- Epilogue
- Bibliography
- Index

Latest Print 2009 / 280 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-2858-7 / 195.00
Bioinformatics: Methods and Applications: Genomics, Proteomics and Drug Discovery, 4th ed.

S.C. RASTOGI, formerly Professor and Head, Biological Sciences Group at Birla Institute of Technology and Science (BITS), Pilani.

NAMITA MENDIRATTA, Vice-President, IL&FS Technologies, New Delhi.

PARAG RASTOGI, has worked in industry in various capacities in IT and consulting.

Designed as a text for students and professionals pursuing careers in the fields of molecular biology, pharmacy and bioinformatics, the fourth edition continues to offer a fascinating and authoritative treatment of the entire spectrum of bioinformatics, covering a wide range of high-throughput technologies. In this edition, four new chapters are included and two chapters are updated.

As a student-friendly text, it embodies several pedagogic features such as detailed examples, chapter-end problems, numerous tables, a large number of diagrams, flow charts, a comprehensive glossary and an up-to-date bibliography. This book should prove an invaluable asset to students and researchers in the fields of bioinformatics, biotechnology, computer-aided drug design, information technology, medical diagnostics, molecular biology and pharmaceutical industry.


Latest Print 2013 / 648 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4785-4 / ` 475.00

Fundamentals of Bioanalytical Techniques and Instrumentation

SABARI GHOSAL, Associate Professor, Amity Institute of Biotechnology, Noida, Uttar Pradesh.

A.K. SRIVASTAVA, Director, Amity Institute of Biotechnology.

Bioanalytical techniques are the integrated methods used in biological sciences and analytical chemistry. This comprehensive and well-written book is intended for those who wish to have a strong foundation in Biotechnology. The book deals with various concepts, techniques, and instruments used in bioanalysis as well as their diverse practical applications.

The text provides a good understanding of the general laboratory techniques, microscopic methods, various separation and spectroscopic techniques and many common issues of experimental design and data analysis. In addition, it discusses, in detail, various hydrodynamic techniques like sedimentation and centrifugation, pH, diffraction methods, bioreactors and, finally, the application of computers in fermentation technology.

KEY FEATURES
• Covers most bioanalytical techniques studied in Biotechnology.
• Provides a large number of diagrams to illustrate the concepts and methods.
• Contains Review Questions.

This book is primarily intended as a text for undergraduate students of Biotechnology (B.Sc./B.Tech.) for their course on Methods of Instrumentation and Bioanalytical Techniques. Many concepts and techniques covered in the text are also prescribed for postgraduate courses (M.Sc./M.Tech.) in Biotechnology in most Indian universities. In addition, the book will be extremely useful as a reference for researchers, the faculty, and professionals in the field.


Latest Print 2013 / 308 pp. / 17.8 x 23.5 cm
B. SIVASANKAR, is Professor, Department of Chemistry, Anna University, Chennai.

This systematically organized and well-balanced book compresses within the covers of a single volume the theoretical principles and techniques involved in bioseparations, also called downstream processing. Organized in its 15 chapters, the text covers in the first few chapters topics related to chemical engineering unit operations such as filtration, centrifugation, adsorption, extraction and membrane separation as applied to bioseparations. The use of chromatography as practiced at laboratory as well as industrial scale operation and related techniques such as gel filtration, affinity and pseudo-affinity chromatography, ion-exchange chromatography, electrophoresis and related methods have been discussed. The important applications of these techniques have also been highlighted.

DISTINGUISHING FEATURES
• Basic principles involved in the various techniques are dealt with illustrative diagrams and description.
• Worked examples are given at the end of relevant chapters.
• An overview of entire course/subject of bioseparations is presented in Chapter 1.

The book is intended primarily as a textbook for undergraduate and postgraduate students of biotechnology—both in science and engineering and those in the industry engaged in biotechnology research.


Latest Print 2014 / 280 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-2649-1 / £ 275.00
SCIENCES AND MATHEMATICS

Biotechnology (Cell and Tissue Culture)

Introduction to Plant Cell, Tissue and Organ Culture

SUNIL D. PUROHIT, Professor and Head, Department of Botany, Mohanlal Sukhadia University, Udaipur.

Designed primarily as a text for undergraduate and postgraduate students of Botany and Plant Biotechnology, the book discusses the theoretical aspects and modern applications of plant cell, tissue and organ culture.

Written with the aim of providing up-to-date information on the subject, and focused on the concept of commercialization of plant cell culture, the contents have been presented with clarity.

The book not only discusses the theoretical aspects of plant tissue culture but also emphasizes the art of its practice. It also provides a systematic explanation of asepsis and methods of sterilization, plant tissue culture techniques, culture of reproductive structures, plant tissue culture in germplasm conservation, its applications in the industry and plant pathology and operation and management of greenhouse hardening unit. In addition, it discusses in vitro propagation of plants (micro-propagation) with a series of case studies pertaining to tree species and horticultural crops.

Besides students, the book will also prove to be useful for researchers, scholars and teachers.


Latest Print 2013 / 324 pp. / 17.8 x 23.5 cm

PHI Learning: Publications

Biotechnology (Environmental Biotechnology)

Introduction to Environmental Biotechnology, 3rd ed.

A.K. CHATTERJI, Formerly Professor of Applied Botany and Biotechnology, Indian Institute of Technology Kharagpur; and Formerly Emeritus Fellow, School of Environmental Science, Jadavpur University, Kolkata.

Intended as a text for the students of M.Sc. (Environmental Science), B.Tech. and M.Tech. (Environmental Engineering), this thoroughly revised Third Edition incorporates the latest advances and trends in Environmental Biotechnology.

The text focuses on the utilization of modern biological and biochemical tools, such as Genetically Modified Organisms (GMOs), cell biological methods, biosensors, bioplastics and bio-fuels. It explains how to conserve the rapidly dwindling bio-resources and judiciously exploit the bio-sphere and also projects the future possibilities of this technology in the 21st century.

This book can also serve as a useful guide to research scholars and practising professionals.

The Third Edition includes

• A new chapter (Chapter 10) containing some special emerging topics, viz. DNA sensing, polymer biodegradation and oil spill bio-remediation.
• Updated Chapters 5, 6, 9, 11 with latest information and developments in environmental biotechnology.

KEY FEATURES

• Covers all the aspects of environmental biotechnology—from ecosystem to genetic and molecular levels—supported by authentic data and information.
• Delineates strategies and protocols for the utilization of microbes in solving problems of environment, including the use of the well-known super-bug pseudomonas putida.
• Discusses modern biotechnological tools in environmental monitoring and analysis.
• Uncovers the production processes and advantages of biofuels.


Latest Print 2011 / 248 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-4298-9 / ₹ 225.00
Enzyme Technology: Pacemaker of Biotechnology

NOORALABETTU KRISHNA PRASAD, Professor, Department of Biotechnology, P.A. College of Engineering, Mangalore, Karnataka.

Keeping in view the well-established place of enzymes in the field of biotechnology and the recent development in biotech industries, this comprehensive and well-written textbook presents the fundamental concepts of enzyme technology, emphasizing the practical and economic aspects of enzyme usage.

Beginning with an overview of enzymes giving insights into the physicochemical properties, classifications, sources, mechanisms and characteristics of enzymes, the text discusses the enzyme kinetics in detail. It furnishes a great deal of information on potential of enzymes for their commercial exploitation. The text then goes on to describe the biotechnical significance of enzymes with their applications in the fields of food and pharmaceutical industries. The text is supported by a large number of solved examples and illustrative diagrams.

Primarily designed for undergraduate and postgraduate students of biotechnology and biochemical engineering, the book will also be useful to professionals, researchers and entrepreneurs.

KEY FEATURES
- Written in an easy-to-understand style.
- Provides simple, clear and authoritative guide to the principles and scope of enzymes in biotechnology.
- Includes chapter-end review questions based on recently appeared university question papers.


Immunology

FATHIMUNISA BEGUM, formerly Reader, Department of Zoology, Holy Cross College, Tiruchirappalli, Tamil Nadu.

A weak immune system is susceptible to various diseases and infections caused by foreign bodies like bacteria, fungus and viruses. From a trivial cold to a serious cancer—one is prone to all if the immune system is not strong enough to fight against these foreign bodies. This text gives a comprehensive account on human immune system, its basics, types, structure and any to Cancer. Part antibodies, and the advanced topics of Immunology like immunodeficiencies and immunotherapy.

The book explains physiological functioning of the immune system in states of both health and diseases; malfunctions of the immune system in immunological disorders (auto-immune diseases, hypersensitivities, immune deficiency, transplant rejection); the physical, chemical and physiological characteristics of the components of the immune system in vitro, in situ, and in vivo, in detail.

The text embodies a new insight into immunological concepts in simple, straightforward and comprehensive language with lucid and clear illustrations. It covers up-to-date information on immunoprophylactic, immunodiagnostic and immunotherapeutic methods.

The neatly drawn figures complement the theories well, enabling the students to grasp the concepts readily. The Review Questions at the end of the chapters help the students to think critically and answer. The book also incorporates competitive examination questions.

The book is intended for the undergraduate and postgraduate students of Biotechnology, Zoology, Microbiology, Biochemistry and Immunology. Besides, the book will be equally beneficial for the students appearing for competitive examinations like UGCNET, CSIR, SLET and civil services.

SEEMI FARHAT BASIR, Professor, Department of Biosciences, Jamia Millia Islamia, New Delhi.

Primarily intended as a textbook for the undergraduate and postgraduate students of Biosciences, Biotechnology and Biochemistry, this compact and well-organized text now in its Second Edition introduces a chapter on Immunity to Infectious Agents.

The book gives complete coverage of all the key topics in modern immunology without excessive detail or theoretical discussion. Each chapter is enriched with numerous well-labelled illustrations. Beginning with an introduction to the immune system including different types of immunity, immunogens and immunoglobulins, this text covers the basic concepts of antigen–antibody interaction and various methods of determining them. It also includes topics on lymphocytes, Major Histocompatibility Complex (MHC) and its classes, graft rejection, and complement pathways. The book concludes with a description on different types of vaccines, and cytokines which are a group of regulatory proteins.

This textbook will also be useful to the students of B.Tech. (Biotechnology).

KEY FEATURES
- Encompasses the most important topics on HIV and AIDS.
- Emphasizes the concept of tumour immunology and the therapeutic strategies used against tumours.
- Discusses autoimmunity, its causes and current therapies.
- Includes multiple-choice questions at the end of each chapter.

CONTENTS:

ISBN-978-81-203-4576-8 / 250.00

Analytical Chemistry

DHRUBA CHARAN DASH, Professor, School of Chemistry, Sambalpur University, Orissa.

This book provides a clear and concise understanding of the principles, applications and limitations of the various techniques involved in analytical chemistry. It covers all major areas such as qualitative analysis, quantitative analysis, data analysis, analysis of organic compounds, separation and purification techniques, electroanalytical techniques and spectroanalytical techniques. The book will motivate the students to face the academic and research challenges in the field of analytical chemistry in performing analytical analysis and interpreting the results obtained.

Intended primarily as a text for undergraduate students and postgraduate students (B.Sc. and M.Sc.) of chemistry, the book would also be of great benefit to the students who are appearing in NET and GATE examinations.

KEY FEATURES
- Provides clear introductions to key analytical methods.
- Uses a large number of illustrations to make the topics self-explanatory.
- Includes a large number of worked out problems for easy understanding of the concepts.
- Contains numerous objective type questions, short answer type questions and graded problems to test the readers' understanding of the theory.


ISBN-978-81-203-4077-0 / 395.00
The applications of colloids and interfaces are ubiquitous in human civilization. Beginning with edibles and personal hygiene products, the applications of colloid and interface science are visible in large-scale industrial undertakings such as petroleum recovery, manufacture of heavy chemicals and coating processes. In recent times, it has grown into a multidisciplinary subject meant for study by the chemical engineers, biotechnologists, chemists, physicists and environmental scientists.

This book provides a thorough understanding of the fundamental concepts and applications of colloid and interface science. It deals with the colloid chemistry and interfacial phenomena at both fluid-fluid and solid-fluid interfaces. The emerging areas of colloid and interface science such as nanomaterials and nanotechnology have also been discussed.

The book is designed as a textbook for B.Tech. students of chemical engineering. Besides, it would also be useful to the students of biotechnology, chemistry, chemical engineering, food science, physics and environmental science, scientists and engineers working in this field will also find this book useful.

Explain with a large number of figures and solved problems, and with the aid of many unsolved problems, this text should prove to be very helpful for understanding the subject.


Latest Print 2010 / 520 pp. / 17.8 × 23.5 cm

Colloid and Interface Science

PALLAB GHOSH, Associate Professor, Department of Chemical Engineering, Indian Institute of Technology Guwahati.

Environmental Chemistry, 2nd ed.

SAMIR K. BANERJI, Formerly Professor of Chemistry, Birla Institute of Technology and Science, Pilani, Rajasthan.

This text on aspects relating to environmental chemistry is designed for courses taught in departments of science and environment, biotechnology, and chemical and civil engineering. It provides a good exposure to the biological diversity of the environment and deals with its various life supporting systems, their ecological aspects and effects on the sustenance of life.

This book attempts to cover the important aspects of air and water pollution, and several other effects of industrial and agricultural activities on pollution.

This revised and new edition also discusses chemical toxicology and waste management.

KEY FEATURES
• Discusses catastrophic depletion of oxygen and molecular mechanisms on mutagenesis, and their overall impact on the environment.
• Analyzes the quantification of pollutants through microbiological and biochemical techniques; eutrophication level and its impact on Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD).
• Explains the role and implication of some less common pollutants such as metals, mines, and polymers.


Latest Print 2013 / 188 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-1576-1 / 150.00
### Food Processing and Preservation

**B. Sivasankar**, Professor at Department of Chemistry, Anna University, Chennai.

This book provides a thorough understanding of all major aspects of food processing with an emphasis on the microorganisms associated with food, before going into the problems of large-scale production and preservation of foodstuffs.

Written in a style that is student-friendly, the text introduces the important aspects of food science, such as functional role of the nutrients, the changes that the nutrients undergo during processing and preservation, and the chemical reactions responsible for spoiling various food materials as well as maintaining the organoleptic properties of foods.

Intended as a textbook for undergraduate students of science and engineering, the study would also benefit the postgraduate students offering courses in food science as well as professionals and researchers.


Latest Print 2014 / 372 pp. / 16.0 × 24.1 cm  

### Chemistry in Daily Life, 3rd ed.

**Kirpal Singh**, Member of the Board of Directors of Pacific Basin Consortium for Health and Environment, Honolulu, Hawaii and also formerly Professor of Chemistry, and Dean of Natural and Physical Sciences, University of Papua, New Guinea. He has been Editor of Science in New Guinea and Commissioner on the PNG Commission for Higher Education and representing PNG for over eight years on the Board of Directors of the PCB.

This book highlights the importance of chemistry in human well-being by introducing the readers to the basic usefulness of chemistry in everyday life. Chemistry has helped in creating valuable products that have transformed the lifestyle of people. Since we spend lots of money in buying our daily requirements, there is a need for us to understand the benefits and hazards of using consumer products which contain chemicals. In this context, this book will help readers to make reasoned choices and intelligent decisions in buying consumer products which contain chemicals.

This text is divided into seventeen chapters devoted to the basic necessities of life like food, shelter, clothing, healthcare, and energy and consumer products. Topics on chemistry in environment, crime, warfare, arts, conservation, communications and transportation are also highlighted in individual chapters. All these topics are discussed with regard to the needs of modern society.

In this third edition, the various chapters have been updated with current information keeping the language simple and friendly. Critical thinking exercises and questions have been included. The style of questions included in the book is to meet the requirement of various competitive examinations such as Indian Civil Services and entrance examinations in medicine and engineering.


Latest Print 2013 / 188 pp. / 16.0 × 24.1 cm  
ISBN-978-81-203-4617-8 / ₹ 175.00
Inorganic Chemistry

BALARAM SAHOO, Former Professor, Department of Chemistry, IIT Kharagpur.
NIMAI CHARAN NAIK, Former Professor, Department of Chemistry, Dhenkanal Autonomous Government College, Government of Orissa.
ASUTOSH SAMANTARAY, Associate Professor, Department of Chemistry, College of Basic Science and Humanities, Orissa University of Agriculture and Technology, Bhubaneswar.
PRAFULLA KUMAR PUJAPANDA, Reader and Head, Department of Chemistry, Dhenkanal Autonomous Government College, Dhenkanal, Orissa.

This textbook provides a comprehensive and rigorous explanation of inorganic chemistry to enable undergraduate and postgraduate students to learn the subject in a clear, direct and understandable way.

The text is divided into four parts. Part one on basic concepts, deals with topics such as the atom its structure, periodic table and periodic properties. The second part on chemistry of non-transitional elements, discusses the elements such as hydrogen, elements of Group 1, Group 2, Group 13, Group 14, Group 15, Group 16, Group 17 and Group 18. The third part consists of chapters on chemistry of transitional elements, such as scandium, titanium, vanadium, chromium, and so on. The final part of the book covers some special topics including organometallic compounds and bio-inorganic chemistry.

The book is profusely illustrated and provides numerous chapter-end exercises for a sound understanding of the subject by the students.

CONTENTS: Preface. Part One: Basic Concepts—The Atom. Elements and their Cosmic Genesis. Atomic Structure. Periodic Table and Periodic Properties. Theories of Chemical Bonding, Molecular Symmetry and Group Theory. Part Two: Chemistry of Nontransitional Elements—Hydrogen. Elements of Group 1. Elements of Group 2. Elements of Group 13. Elements of Group 14. Elements of Group 15. Elements of Group 16. Elements of Group 17. Elements of Group 18. Part Three: Chemistry of Transitional Elements—Transition Metals and Co-ordination Compounds. Theories of Transition Metal Complexes. Kinetics and Mechanism of Inorganic Reactions. Chemistry of Scandium (Sc), Chemistry of Titanium (Ti), Chemistry of Vanadium (V), Chemistry of Chromium (Cr), Chemistry of Manganese (Mn), Chemistry of Iron (Fe), Chemistry of Cobalt (Co), Chemistry of Nickel (Ni), Chemistry of Copper (Cu), Chemistry of Silver and Gold. Chemistry of Zinc (Zn), Cadmium (Cd), Mercury (Hg), Chemistry of Yttrium (Y), Chemistry of Zirconium (Zr) and Hafnium (Hf), Chemistry of Niobium (Nb) and Tantalum (Ta). Chemistry of Molybdenum (Mo) and Tungsten (W). Chemistry of Technetium (Tc) and Rhenium (Re), Chemistry of Ruthenium (Ru) and Osmium (Os). Chemistry of Rhodium (Rh) and Iridium (Ir), Chemistry of Palladium (Pd) and Platinum (Pt). Chemistry of Lanthanoids and Actinoids. Part Four: Some Special Topics—Non-aqueous Solvents. Organometallic Compounds. Complexes of pi-acceptor Ligands: (a) Carbonyl Complexes (b) Nitrosyl Complexes (c) Cyanide Complexes (d) Molecular Complexes. Bio-inorganic Chemistry.
G. ARULDHAS, Formerly Professor and Head of Physics Department, and Dean Faculty of Science, University of Kerala.

Designed to serve as a textbook for postgraduate students of physics and chemistry, this second edition improves the clarity of treatment, extends the range of topics, and includes more worked examples with a view to providing all the material needed for a course in molecular spectroscopy—from first principles to the very useful spectral data that comprise figures, charts and tables.

To improve the conceptual appreciation and to help students develop more positive and realistic impressions of spectroscopy, there are two new chapters—one on the spectra of atoms and the other on laser spectroscopy. The chapter on the spectra of atoms is a detailed account of the basic principles involved in molecular spectroscopy. The chapter on laser spectroscopy covers some new experimental techniques for the investigation of the structure of atoms and molecules. Additional sections on interstellar molecules, inversion vibration of ammonia molecule, fibre-coupled Raman spectrometer, Raman microscope, supersonic beams and jet-cooling have also been included.

Besides worked-out examples, an abundance of review questions, and end-of-chapter problems with answers are included to aid students in testing their knowledge of the material contained in each chapter.

Solutions manual containing the complete worked-out solutions to chapter-end problems is available for instructors.

CONTENTS:

SONIA RATNANI, Assistant Professor in Chemistry, Ramjas College, University of Delhi. SHRINIWAS GURJAR, Assistant Professor in Chemistry, Ramjas College, University of Delhi.

Primarily intended for the undergraduate students of science, the book deals with the practical aspects of organic chemistry and discusses how experiments should be done in the laboratory.

The book introduces the various types of components used in laboratories and describes basic techniques used for purification. It elaborates different methods of identification of organic compounds, their preparation, and analysis. In addition, it emphasizes qualitative analysis of organic compounds. The book contains essential experiments done in an organic lab and also explains the theoretical background of reactions involved.

This book is an attempt to provide students with the often used methods in an easy to understand manner, including explanations of theory, procedures and interpretations of results of the experiments.

Besides undergraduate students of science, this book is also useful for the postgraduate students of chemistry.

KEY FEATURES
• Includes reaction mechanism of each reaction
• Describes in Appendices safety measures to be taken in laboratory and how to prepare chemical reagents
• Contains self assessment questions at the end of each chapter.

**Fundamentals of Reaction Mechanisms in Organic Chemistry**

R.P. NARAIN, formerly Associate Professor, Department of Chemistry, University of Gorakhpur.

Written for the undergraduate and postgraduate students of chemistry, this textbook presents comprehensive coverage of different types of reactions and their mechanisms. The need for such a book has been felt for a very long time both by students and teachers.

The book discusses chemical kinetics, structure and reactivity and reactive intermediates such as carbenes, nitrenes and benzynes. It also describes the mechanism of tautomerism and the concepts of aromaticity. In addition, the book elaborates the various reactions such as substitution, free radical, addition, elimination and alkylation reactions. Finally, the text presents a detailed discussion on molecular rearrangements, oximes and diazo compounds, as well as the concepts of photochemistry.

**KEY FEATURES**
- Presents a number of examples to explain the mechanistic concepts.
- Offers graphs and tables at various places to illustrate the key points.
- Includes latest information on the subject.


Latest Print 2011 / 288 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4179-1 / ` 275.00

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**Organic Chemistry**

BHUPINDER MEHTA, Associate Professor, Department of Chemistry, Swami Shardhanand College, University of Delhi.

MANJU MEHTA, Associate Professor, Department of Chemistry, Maitreyi College, University of Delhi.

This text presents a thorough explanation of organic chemistry for undergraduate students in a clear, direct, and understandable way. The goal of this book is to make the study of organic chemistry as stimulating, interesting, and relevant as possible.

The book contains over 400 (including parts) solved problems from simple to really challenging ones with suitable explanations. In addition, over 275 examples and solved problems on IUPAC nomenclature, with varying degree of difficulty, are included.

Clearly written and logically organized, the authors have endeavoured to make this complex and important branch of science as easy as possible for students to learn from and for teachers to teach from.


Latest Print 2014 / 1164 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-2441-1 / ` 595.00
This comprehensive textbook covers the principal areas of physical chemistry, such as thermodynamics, quantum chemistry, molecular spectroscopy, chemical kinetics, electrochemistry and nanotechnology.

In a methodical and accessible style, the book discusses classical, irreversible and statistical thermodynamics and statistical mechanics, and describes macroscopic chemical systems, steady states and thermodynamics at a molecular level. It elaborates the underlying principles of quantum mechanics, molecular spectroscopy, X-ray crystallography and solid state chemistry along with their applications. The book explains various instrumentation techniques such as potentiometry, polarography, voltametry, conductometry and coulometry. It also describes kinetics, rate laws and chemical processes at the electrodes. In addition, the text deals with chemistry of corrosion and nanomaterials.

This book is primarily designed for the undergraduate and postgraduate students of chemistry (B.Sc. and M.Sc.) for courses in physical chemistry.

KEY FEATURES

• Gives a thorough treatment to ensure a solid grasp of the material.
• Presents a large number of figures and diagrams that help amplify key concepts.
• Contains several worked-out examples for better understanding of the subject matter.
• Provides numerous chapter-end exercises to foster conceptual understanding.

International System of Units:
A Handbook on SI Units for Scientists and Engineers

K. SOMAN, a retired scientist from Indian Space Research Organisation (ISRO).

This book contains comprehensive reference material on the use of the International System of Units (SI system). It is now the world’s most widely used system of measurement, developed in 1960 from the metric system. As some countries, notably the United States and the United Kingdom, still continue to use customary units in addition to SI, this book also provides information on CGS, FPS and MKS systems of units.

The book is organized into 12 chapters. The first nine chapters acquaint the readers with the definitions of the base units in the SI system, application of prefixes, realization of derived and supplementary units, conversion factors, general physical data, and several examples to illustrate the use of conversion factors between the units used in different systems.

The book also contains engineering related data, in SI units, on properties of some metals, alloys and polymers for use by design engineers. Data on threaded fastners is also presented in SI units. Besides, there is miscellaneous other information, such as properties of gases, paper sizes, solar system, and earthquake severity measurement scale, presented in the context of the use of the SI system.

The book will be useful as a handy guide to students of science and engineering, technicians, scientists and engineers, as well as authors and editors of technical books.

CONTENTS:

Latest Print 2012 / 120 pp. / 16.0 × 24.1 cm ISBN-978-81-203-3653-7 / 125.00


R.C. SRIVASTAVA formerly Professor of Chemistry at the Harcourt Butler Technological Institute, Kanpur as well as at BITS, Pilani and Banaras Hindu University. Professor Srivastava was a Fellow of The National Academy of Sciences, India.

SUBIT K. SAHA, Assistant Professor of Chemistry at BITS, Pilani.

ABHAY K. JAIN, Professor in the Department of Chemistry, Deen Dayal Upadhyaya Gorakhpur University.

Though thermodynamics is a tool used in all sciences and technologies, this book is especially designed to acquaint science students with the whole breadth of the subject covering both equilibrium and non-equilibrium regions. Equilibrium thermodynamics covered in the first-seven chapters caters to the needs of students up to the B.Sc./B.Sc. (Hons.) level. The next three chapters devoted to non-equilibrium thermodynamics and network thermodynamics fulfill the needs of the syllabi in these topics introduced in most universities at the postgraduate level. Chapters on ‘The Question of Ideality’ and ‘The Non-linear Region’ were the new additions to the second edition. In the third edition a new chapter on “Causality Principle in Non-equilibrium Thermodynamics” has been added. The readers may find the new chapter intellectually stimulating.

The book is an accessible, straightforward discussion of basic topics, beginning with the laws of thermodynamics and focusing on derivations of basic relations. The text is suitably illustrated throughout with examples of various applications of interest to science students. It explains concepts systematically, teaches problem-solving meaningfully, and includes concept-elucidating questions that are intended to reinforce the student’s understanding of the material.

CONTENTS:

Intended as a text for the students of M.Sc. (Environmental Science), B.Tech. and M.Tech. (Environmental Engineering), B.Tech. (Biotechnology) and B.Sc. (Biotechnology), this thoroughly revised Third Edition incorporates the latest advances and trends in Environmental Biotechnology. The text focuses on the utilization of modern biological and biochemical tools, such as Genetically Modified Organisms (GMOs), cell biological methods, biosensors, bioplastics and bio-fuels. It explains how to conserve the rapidly dwindling bio-resources and judiciously exploit the bio-sphere and also projects the future possibilities of this technology in the 21st century. This book can also serve as a useful guide to research scholars and practising professionals.

The Third Edition includes
• A new chapter (Chapter 10) containing some special emerging topics, viz. DNA sensing, polymer bio-degradation and oil spill bio-remediation.
• Updated Chapters 5, 6, 9, 11 with latest information and developments in environmental biotechnology.

KEY FEATURES
• Covers all the aspects of environmental biotechnology—from ecosystem to genetic and molecular levels—supported by authentic data and information.
• Delineates strategies and protocols for the utilization of microbes in solving problems of environment, including the use of the well-known super-­bug Pseudomonas putida.
• Discusses modern biotechnological tools in environmental monitoring and analysis.
• Uncovers the production processes and advantages of bio-fuels.

CONTENTS:

Latest Print 2013 / 188 pp. / 16.0 × 24.1 cm ISBN-978-81-203-1576-1 / 150.00
SCIENCEs AND MATHEMATICS

Environmental Science/Engineering (ECOLOGY)


S.V.S. RANA, former Vice Chancellor of Bundelkhand University, Jhansi. He has served Chaudhary Charan Singh University, Meerut as Professor and Head, Department of Zoology; Coordinator, Department of Environmental Science; and Coordinator, UGC Innovative Assistance Program in Toxicology.

This revised fifth edition is a lucid presentation of the fundamental concepts and principles of ecology and environmental science. Extensively illustrated, the book provides in-depth coverage of major areas such as atmospheric and soil science, hydrobiology, biodiversity, and pollution ecology. It seeks to impart comprehensive understanding of the major ecological issues, policies and laws, crucial for solving environmental problems. New sections on vital topics such as acid rain and deposition, metapopulations, environmental disasters and the Bali Summit on Climate Change 2007 contribute strongly to this endeavour.

The book is primarily intended for undergraduate (B.Sc.) students of environmental science and other relevant biological sciences. It will also be very useful for postgraduate (M.Sc.) students of these subjects as well as field professionals and researchers.

KEY FEATURES
• Use of indigenous examples for explaining subject matter
• Coverage of extreme environments such as Antarctica, the Arctic region, open oceans, and deserts, along with up-to-date information on major ecosystems
• Chapters devoted to biodiversity as well as natural and genetic resources of India
• Detailed descriptions of ecocompartments such as atmosphere and lithosphere


Latest Print 2013 / 608 pp. / 16.0 x 24.1 cm ISBN-978-81-203-4786-1 / 375.00

Environmental Science/Engineering (ENERGY STUDIES)

Wind Power Technology

JOSHUA EARNEST, Professor in the Department of Electrical and Electronics Engineering, National Institute of Technical Teachers’ Training and Research (NITTTR), Bhopal.

This comprehensive textbook provides engineering students the underlying principles of different types of grid connected renewable energy sources and in particular, the detailed underpinning knowledge required to understand the different types of grid connected wind power plants. A unique feature of this book is that along with every figure title, a brief explanation follows that helps the reader to understand the concepts without going back to the paragraphs again.

The saying that a picture is more than a thousand words is evident from the 260 illustrations. The relevant pictures, tables, graphs and ample worked-out examples accelerate the learning. The software based computer simulation examples of grid connected wind electric generators is another special characteristic of this book. Still, another unique feature is the inclusion of a chapter on the much sought after small wind turbine technologies.

Designed as a textbook for Renewable Energy courses offered in the undergraduate and diploma engineering programmes in most of the universities of India, the book can not only serve for the one-semester stream specific course on Renewable Energy or Wind Energy for senior level undergraduate students of electrical, mechanical, electronics and instrumentation engineering but also for the postgraduate engineering students.


Latest Print 2014 / 484 pp. / 21.6 x 27.8 cm ISBN-978-81-203-4778-6 / 475.00

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PHI Learning: Publications
Today, the tide has turned so strongly in favour of renewables that for the first time since the dawn of the fossil fuel era over two hundred years ago renewable energy technologies have started attracting more investment globally than that in the fossil fuel-based technologies.

This text provides a comprehensive and wide ranging introduction to various renewable energy technologies and their applications, such as solar, wind, biomass, biogas, wave, geothermal, tidal and small hydel. It provides a thorough understanding of the basic energy conversion processes taking place in various renewable energy-based equipment like heat engines, photovoltaics, wind turbines, windmills, wave machines, and so on. The text also deals with the impact of renewable energy sources on global warming and pollution.

The book is intended for courses in Environmental Sciences, Environmental/Electrical/Mechanical Engineering and Energy Studies at the undergraduate and postgraduate levels. It will also serve as a useful reference for scientists, technocrats and environmentalists.

India is generously endowed with renewable energy sources. I hope the present book by Prof. Tasneem Abbasi and Prof. S.A. Abbasi will help students, renewable energy professionals and even the general masses to understand various aspects of renewable energy technologies and their applications.

— Dr. FAROOQ ABDULLAH
Hon’ble Minister, New and Renewable Energy Government of India

Renewable Energy Sources and Emerging Technologies, 2nd ed.

D.P. KOTHARI, Director General of Vindhyachal Group of Institutions, Indore.

K.C. SINGAL, after graduation in Electrical Engineering in the year 1957 from Roorkee University (now IIT Roorkee), served in various capacities with Haryana State Electricity Board (HSEB) and retired as Chief Engineer Operation in the year 1992.

RAKESH RANJAN, Principal of International Institute of Technology and Business, Sonepat, Haryana.

This book, now in its Second Edition, is an introductory text on renewable energy sources, technologies and their applications—a subject which is becoming increasingly important worldwide. This edition includes two new chapters that introduce contemporary practices in renewable technologies. It also discusses issues on environmental degradation and its reasons and remedies.

Besides this, a large number of numerical problems to correlate theory with typical values and chapter-end review questions are also given to reinforce the understanding of the subject matter.

Written in an accessible style, this text is designed to serve the needs of undergraduate students in electrical, mechanical and civil engineering disciplines. It will also be useful for all higher-level courses in energy programmes and multi-disciplinary postgraduate courses in science and engineering.

NEW TO THIS EDITION

• Inclusion of two new chapters—‘Hybrid Systems’ and ‘Environment, Energy and Global Climate Change’.
• A new section on Distributed Energy System and Dispersed Generation.

• Appendices on
  – Smart grid and grid system in India
  – Remote village electrification with renewable energy sources
  – Indian Electricity Act 2003, which supports exploration of Renewable Energy.

SALIENT FEATURES

• Provides balanced introduction to all aspects of solar energy conversion including PV technology.
• Gives comprehensive coverage of all facets of wind power development.
• Explains small hydropower projects with illustrative figures.
• Emphasises the importance of availability of biofuel from Jatropha plant.
• Special attention is given to ‘gas hydrates’ and ‘hydrogen energy’ sources.
• Fuel cells are explained as per the latest technology available.
• Harnessing of ocean energy is dealt with in detail.
• Utilisation of biomass and solid waste for energy recovery is emphasised.

CONTENTS:

Latest Print 2014 / 456 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4470-9 / ₹ 325.00

PHI Learning: Publications
In the contemporary world, wind energy is emerging as one of the most viable alternatives to meet the challenge of increasing energy demand, particularly for electrical energy generation. It is clean, fuel-free and available almost in every country in the world and in abundance in off-shore. This book, now in its Second Edition, covers most of the essential engineering principles, theories and best practices for wind energy development for electricity generation with clear emphasis on state-of-the-art. In this edition, substantial addition has been made in the chapters on Aerodynamics, Siting, Wind Farm Design, and Wind Energy Economics. This comprehensive book on wind energy is intended as a text for the undergraduate and postgraduate students of Mechanical/Electrical Engineering and students pursuing Energy Studies. It will also serve as a handbook and ready reference for practicing engineers and professionals in the field of wind energy.

KEY FEATURES

• Describes technological advances in wind energy.
• Deals with wind resource assessment methodology, instrumentation and advanced techniques.
• Discusses the concepts of aerodynamics for wind turbine blade and rotor.
• Provides in detail the design concepts for modern horizontal axis wind turbine.
• Covers layout design, micro-siting and modelling of wind farms.
• Analyzes the economics of wind energy projects for electricity generation.
• Focuses on the impact of wind energy on the environment.


Latest Print 2013 / 352 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4490-7 / ₹395.00
Biodiversity is the variety of life in a given range. The world today is under tremendous threat of unprecedented loss of biodiversity. Issues like global warming, environmental pollution, recurrent natural calamities, etc. are of major concern for scientists all over the world.

This comprehensive text provides a complete coverage of the subject. Beginning with a detailed introduction of biodiversity, its meaning, history and importance, the text discusses the topics such as species diversity, systematics, determination of the status of bioresources, pattern of distribution of global species, genetic biodiversity and ecosystem biodiversity. Proceeding further, the book gives an elaborate account on various drivers that lead to biodiversity loss and the impact of this loss on the global climate. This book also covers the topics of biopiracy and various laws and policies associated with it. Finally, the text describes the importance of indigenous knowledge of several communities that provide clues for biodiversity conservation. The use of biotechnology based methods and various measures to preserve natural resources and conserve biodiversity is the highlight of the text.

This book is primarily designed for the undergraduate and postgraduate students of Environmental Science, Zoology and Botany. Besides, it will also be useful to the students pursuing P.G. Diploma or other professional and technical courses in Environmental Science. The text is of immense use to academicians, researchers and for all those who have concern for the environmental issues including its conservation.

KEY FEATURES
- Illustrated profusely with numerous photographs, flow charts and diagrams.
- Incorporates a number of tables to acquaint the readers with a quick view of data related to biodiversity.
- Provides review questions at the end of every chapter to help students check their understanding of the subject.
- Explains the contemporary topics like green accounting, sustainable management of natural resources, etc. in an easy to understand manner.
- Gives an elaborate glossary of technical terms to acquaint the students with the terminologies associated with the subject.

PRENTICE-HALL OF INDIA: Publications

Environmental Science/Engineering

Environmental Law and Policy

ARUNA VENKAT, Associate Professor of Law at NALSAR University of Law, Hyderabad. She is the Centre Head of Centre for Humanitarian and Refugee Laws. She also heads the Centre on Law and Society at NALSAR.

This book presents a comprehensive account of the various contours of the environmental jurisprudence in India. It covers the Indian constitutional, legislative, administrative and judicial strategies that have shaped the Indian environmental jurisprudence against the backdrop of the various international efforts to control pollution and preserve the global environment. It deals with the constitutional framework provided for the preservation and protection of Indian environment. In this context, the book gives an extensive picture of Indian administrative and legislative policy framework along with the latest developments in the area. The salient and most important feature of the book is its in-depth account of the innovative judicial enforcement of the constitutional and legislative prescriptions as reflected in the catena of judicial decisions including the latest ones. In this respect, the fundamental right to life guaranteed by Article 21 of the Indian Constitution has been given a very liberal interpretation in order to make it the chief constitutional edifice of the Indian environmental jurisprudence and environmental justice in India.

The book is intended for the students of LL.B. and LL.M. It would also be useful to faculty, research scholars, lawyers and other legal professionals.


Latest Print 2011 / 472 pp. / 16.0 × 24.1 cm

PHI Learning: Publications

SCIENCES AND MATHEMATICS

Environmental Science/Engineering

Elements of Environmental Science and Engineering, 2nd ed.

P. MEENAKSHI, Department of Civil Engineering, Coimbatore Institute of Technology, Coimbatore, Tamil Nadu.

Designed as a text for all undergraduate students of engineering for their core course in Environmental Science and Engineering and for elective courses in environmental health engineering and pollution and control engineering for students of civil engineering, this comprehensive text provides an in-depth analysis of the fundamental concepts. It also introduces the reader to different niche areas of environmental science and engineering.

The book covers a wide array of topics, such as natural resources, disaster management, biodiversity, and various forms of pollution, viz. water pollution, air pollution, soil pollution, noise pollution, thermal pollution, and marine pollution, as well as environmental impact assessment and environmental protection.

KEY FEATURES
• Gives in-depth yet lucid analysis of topics, making the book user-friendly.
• Covers important topics, which are adequately supported by illustrative diagrams.
• Provides case studies to explore real-life problems.
• Supplies review questions at the end of each chapter to drill the students in self-study.


Latest Print 2014 / 348 pp. / 17.8 × 23.5 cm

PHI Learning: Publications
Today, more than ever before, there is considerable concern about the deterioration of the environment arising from environmental pollution—water, air, noise, radiation and others. For, such pollution has a huge adverse impact on human health, and the hazards it poses are too numerous. There is also a felt-need for environmental protection and management and effective implementation of environmental laws. This comprehensive book, authored by Prof. Sengar, an eminent academic, with his wealth of experience in various areas of environmental law and management, brings these issues into sharp focus.

The book highlights problems such as public health and safety, right to carry on trade vis-à-vis duty to protect environment, right to information about hazardous installations, right to clean environment, and ecological balance for sustainable development. It stresses the need for striking a balance between environment and development to bring about sustainable development. Finally, the text shows how important it is to formulate a legal framework for environmental protection.

**KEY FEATURES**

- While giving a broad conceptual overview of environmental law, the text explains the major environmental laws, examines the relevant provisions, and traces the origin of constitutional support to environmental protection.
- Refers to all leading cases on environmental law and highlights the role of judiciary on entertaining as well as restraining public interest litigations (PILs) to stop environmental violations.
- Provides Appendices containing various environmental laws.
- The accompanying CD-ROM contains text of all relevant environmental laws—both general and specific—to help readers have access to those laws instantly.
- Primarily intended as a text for students of law (LL.B./BA LL.B./LL.M., MBL) and management (MBA), the book should also prove to be an excellent reference for academics, lawyers, judges, environmental activists, environmental managers and corporates concerned with environmental protection.

**CONTENTS:**


Latest Print 2014 / 376 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3059-7 / 275.00
Environmental Science: Principles and Practice

R.C. DAS, Consulting Professor, Xavier Institute of Management, Bhubaneswar (Formerly, Vice Chancellor, Berhampur University, Orissa; Chairman, Orissa State Pollution Control Board, Bhubaneswar).
D.K. BEHERA, Senior Environmental Scientist, State Pollution Control Board, Orissa.

This book fulfills the need for a practical, clearly written introductory textbook on fundamental concepts and basic applications of principles of environmental science. It is designed to cover the curriculum of B.Sc. and M.Sc. courses in Environmental Science.

Besides students, the basic knowledge of environmental management is highly essential today for regulators, industrial managers, and environmental activists. The book provides comprehensive information on all relevant components relating to environmental issues in industries, the purpose being to sensitize the management staff to various environmental laws and regulations.

The book not only gives a thorough treatment of all individual environmental components but also suggests strategies for improvement of environment quality. It discusses various pollution control methodologies along with waste minimization and resource conservation. An attempt is also made to blend the legal guidelines and statutory compliance with technical and scientific approach.

Various environmental management tools have been discussed. Management of hazardous chemicals has been dealt with in a separate chapter.


Latest Print 2008 / 376 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3330-7 / ₹ 250.00

Principles of Environmental Science and Engineering

P. VENUGOPALA RAO, Director, Sridevi Women’s Engineering College, Hyderabad.

Primarily intended as a text for undergraduate students of engineering for their core course in environmental studies, this book gives a clear introduction to the fundamental principles of ecology and environmental science and aptly summarizes the relationship between ecology and environmental engineering.

Divided into three parts, the book begins by discussing the biosphere, natural resources, ecosystems, biodiversity, and community health. Then it goes on to give detailed description on topics such as pollution and control, environmental management, and sustainable development. Finally, it focuses on environmental chemistry, environmental microbiology, and monitoring and analysis of pollutants.

KEY FEATURES
• Key words and summary at the end of each chapter provide the students an easy way of recapitulation.
• A large number of figures illustrate the topics discussed.
• Projects of environmental concern suggested at the end of the book enable the students to work in field projects.

Besides engineering students, undergraduate students in other streams, practicing engineers and professionals would find the text immensely useful.


Latest Print 2012 / 288 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-2893-8 / ₹ 225.00
Textbook of Environmental Engineering

P. VENUGOPALA RAO, Director, Sridevi Women's Engineering College, Hyderabad.

Designed for a first-course in environmental engineering for undergraduate engineering and postgraduate science students, the book deals with environmental pollution and its control methodologies. It explains the basic environmental technology — environmental sanitation, water supply, waste management, air pollution control and other related issues — and presents a logical and systematic treatment of topics.

The book is presented in a student-oriented approach. It is interspersed with solved examples and illustrations to reinforce many of the concepts discussed and apprise the readers of the current practices in areas of water processing, water distribution, collection and treatment of domestic sewage and industrial waste water, and control of air pollution. It emphasizes fundamental concepts and basic applications of environmental technology for management of environmental problems.

Besides students, the book will be useful to the academia of environmental sciences, civil/environmental engineering as well as to environmentalists and administrators working in the field of pollution control.


Textbook on Environmental Studies

S. KANAGASABAI, Associate Professor of Economics, Thiagarajar College, Madurai.

The natural environment of the earth which includes grasslands, deserts, forests, oceans, rivers, beaches, and the atmosphere, has fallen prey to human intervention. This textbook meticulously throws light on how the elements of nature are being depleted and exhausted by the influence of technology, and how can we contribute towards conserving The Nature.

The book comprises seven chapters, and each chapter addresses an issue related to the environment. The issues like conservation of natural resources, maintaining a balance between the various ecosystems, and the biosphere are all dealt with efficiently. A chapter on Biodiversity explains how the diverse climatic conditions (arid deserts, rocky mountains, snowy glaciers) benefit the natural ecosystem’s processes and life-cycles.

The issues like pollution (land, water, air) and other social concerns like population are discussed along with the measures to control them. All the chapters are well-supported with illustrative tables and figures. The review questions are added to check student’s comprehension of the subject.

This textbook is designed as per the UGC model curriculum, and is intended for the undergraduate students of all disciplines.


Variety is the spice of life, and knowing to prepare the different cuisines of the states, enhances the taste buds. This book contains many mouthwatering Indian dishes, their Madhya Pradesh and their predominant role in Indian culture. The simple language and guidelines provide excellent introduction to theory and practices of the regional cooking procedures in Indian states.

The book serves a platter of history of spices, their origin, the religious and medicinal impact of these spices, different cooking utensils and their usage, various methods of cooking and many finger-licking recipes. The text discusses the traditional and special delights of the four broad regions— East, West, North and South. The staple food and their occasion-oriented backdrop dominate all the descriptions. The recipes are simple, tested and standardized so that they can be easily adaptable by the students and professionals of college and food service organizations.

Intended for undergraduate and postgraduate students of hotel management, this textbook will also be useful for the hoteliers and budding professional chefs as it caters to the syllabi prescribed in many universities.

KEY FEATURES

The book covers:

• Staple diet of the people of different religions, cultures and customs
• Varied usage of spices and composite masalas
• Different types of gravies used
• Innumerable dishes and their preparations
• Various domestic tips for kitchen management
• Guidelines on keeping the kitchen fresh and free of odours

Complete Indian cuisine integrated in one compendium


Latest Print 2010 / 312 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4170-8 / ₹ 275.00

This book is a small step in the direction of giving an Indian perspective in understanding the world of fabrics by explaining the factors that contribute to the aesthetics as well as performance of a textile product.

Organised in five parts, this book adopts a systematic approach in defining and exploring the concepts of fabric science. Part I (Fundamentals) discusses the history, composition, classification and properties of textile fibres. Part II (Fibre) focuses on the typical traits of the fibre family. Part III (Yarns) deals with yarn production and its properties. Part IV (Fabrics) covers weaving, knitting and other miscellaneous methods of fabric construction along with the emphasis on the type of fibres used in each case. Part V (Finishing) highlights the colouration and functional finishes of any fabric.

Intended for the undergraduate students of Home Science and Fabric and Apparel Science, the book will also cater to the various courses of fashion designing institutes.

KEY FEATURES

• Relevant illustrations and images to help in grasping the steps of fabric construction.
• Chapter-end exercises aimed at testing the factual knowledge, understanding and application of the concepts.
• Simple examples from everyday life to instil a sense of curiosity in the reader’s mind to know more about the intriguing world of textiles.


Latest Print 2013 / 272 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4183-8 / ₹ 225.00
Baking is both an art and a science, and mastery in baking allows the baker to be creative in exploring new and quality products from inconsistent ingredients and process conditions. This book, now in its second edition, gives a succinct account of the practical and theoretical concepts, the methods and processes involved in the preparation of various bakery products.

The author, with her rich teaching and industry experience in the field, gives a wealth of information about making of various yeast-made products—bread, cakes, biscuits, desserts and pizza—their ingredients, leavening agents, and the functions of salt, sugar, eggs, and so on in bakery production. She also discusses the use of modern technology machines in bakery production, icings, decoration, bakery organization, and many other aspects.

This revised edition updates and simplifies the existing text in a number of places, and also includes a large number of colour photos of finished products and ingredients, which will provide the readers with clear knowledge about them.

This book is mainly intended as a textbook for undergraduate students pursuing courses in Hotel Management, Catering and Nutrition Science and Home Science. Besides, the book can also be useful as a guide for home bakers and industrial bakers as well as those engaged in the profession.

**KEY FEATURES**

- Describes many new bakery items as well as the use of modern machinery in bakery and confectionery.
- Gives a number of Review Questions at the end of each chapter.
- Provides Short Questions and Answers and two Model Question Papers for self-assessment.

The second edition of this textbook on Abstract Algebra continues to provide a fully self-contained treatment of the fundamental concepts of the subject, taking care to introduce each notion with sufficient number of solved examples that would help readers understand and master the theories presented. A fine collection of exercises enriches each chapter, challenging the readers to check their progress in understanding the results and methods of the discipline, as well as motivating them for more algebra.

The book’s writing style is intended to foster students–instructor discussion. A unique learning feature of the text is that each concept in abstract algebra is treated in a separate chapter, taking care of the continuity of the subject matter for easy comprehension by the students. Besides presenting the fundamental concepts and basic properties of groups, rings, modules and fields, including the interplay between them, the second edition has been enriched by the inclusion of a new chapter on matrices and their properties and some special subsets of matrices. In addition, proofs of some of the theorems have been revised and some exercises have been changed into solved examples.

The book provides a pedagogical introduction to the topics of abstract algebra and is especially suited for an undergraduate course, though it will be of equal value to the postgraduate students of the subject.


Latest Print 2013 / 636 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4737-3 / ₹495.00

Advanced Algebra

MADHUMANGAL PAL, Professor of Applied Mathematics, Vidyasagar University, Midnapore, West Bengal.

Intended for the undergraduate students of mathematics, this student-friendly text provides a complete coverage of all topics of Linear, Abstract and Boolean Algebra.

The text discusses the matrix and determinants, Cramer’s rule, Vandermonde determinants, vector spaces, inner product space, Jacobi’s theorem, linear transformation, eigenvalues and eigenvectors. Besides, set theory, relations and functions, inclusion and exclusion principle, group, subgroup, semigroup, ring, integral domain, field theories, Boolean algebra and its applications have also been covered thoroughly.

Each concept is supported by a large number of illustrations and 600 worked-out examples that help students understand the concepts in a clear way. Besides, MCQs and practice exercises are also provided at the end of each chapter with their answers to reinforce the students’ skill.


Latest Print 2013 / 636 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4737-3 / ₹495.00

SCIENCES AND MATHEMATICS
Mathematics (Algebra)
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<td>Mathematics (Algebra)</td>
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<td><strong>Textbook of Matrix Algebra, 3rd ed.</strong></td>
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<td>SUDDHENDU BISWAS, Senior Professor, Department of Statistics, School of Applied Sciences, Amity University, Noida, Uttar Pradesh.</td>
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Intended as a text for postgraduate and undergraduate honours students of Statistics, Mathematics, Operations Research as well as students in various branches of Engineering, this student-friendly book gives an indepth analysis of Matrix Algebra and all the major topics related to it.

Divided into 12 chapters, the book begins with a discussion on Elements of Matrix Theory and Some Special Matrices. Then it goes on to give a detailed discussion on Scalar Function and Inverse of a Matrix, Rank of a Matrix, Generalized Inverse of a Matrix, and Quadratic Forms and Inequalities. The book concludes by giving Some Applications of Algebra of Matrices, Matrices in the Infinite Dimensional Vector Space, and Computational Tracts in Matrices.

This book, which beautifully blends both theory and applications of Matrix Algebra, should prove to be an invaluable text for the students.

**KEY FEATURES**

- Gives a large number of both solved and unsolved problems of Elementary Matrix.
- Provides an exhaustive treatment of Generalized Inverse Matrix with many applications in Statistics.
- Devotes one chapter exclusively to application of Matrices.
- Provides one full chapter on Matrices in the Infinite Dimensional Vector Space, which will be quite useful for postgraduate students.
- Gives an Appendix on R Software which will be extremely useful for students of Statistics.
- Provides Question Bank which will greatly benefit both undergraduate and postgraduate students.


**Latest Print 2012 / 464 pp. / 16.0 × 24.1 cm**


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<td><strong>Algebra and Trigonometry</strong></td>
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<td>USHRI DATTA, Former Vice Principal and Head, Department of Mathematics, Hislop College, Nagpur University.</td>
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<td>A.S. MUKTIBODH, Head, Department of Mathematics, Mohota Science College, Nagpur University.</td>
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<td>S.D. MOHGAONKAR, Assistant Professor and Head, Department of Mathematics, Shri Ramdeobaba Kamla Nehru Engineering College, Nagpur University.</td>
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This concise, easy-to-read text deals with the elementary concepts of abstract algebra, matrices and trigonometry. It discusses in detail topics such as eigenvalues, diagonalisation of matrices, complex numbers, and theory of equations. The text includes many worked-out problems to enhance the students’ grasp of the mathematical concepts discussed and to develop their logical ability in understanding higher mathematics.

**KEY FEATURES**

- Gives a large number of examples to illustrate the concepts discussed.
- Provides chapter-end exercises to test the student’s grasp of the subject.

This student-friendly book is intended as a basic text for undergraduate students of Mathematics. It would also be immensely useful to those pursuing diploma and degree courses in engineering, and to students preparing for All India Engineering/Architecture Entrance Examination (AIEEE), and entrance examinations such as IIT-JEE.

This book is very well-written, lucid and gives ample information... One can learn the methods very easily without tears and tensions.

—Dr. V.N. Dixit, former faculty member, Department of Mathematics, University of Delhi


**Latest Print 2006 / 352 pp. / 16.0 × 24.1 cm**

ISBN: 81-203-2974-0 / 195.00

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**PHI Learning: Publications**
Advanced Calculus

DEVI PRASAD, Professor, Department of Mathematics, IMS Engineering College, U.P. Technical University.

This concise and systematically organized textbook is meant for the undergraduate students of engineering for their courses in Engineering Mathematics. Besides, it is also useful for undergraduate and postgraduate students of mathematics.

This book is divided into nine chapters; the initial chapters provide revision of fundamental concepts of functions, limits and continuity to help students grasp the idea of the derivations treated in the subsequent chapters. Rules for finding derivatives, Taylor’s and Maclaurin’s theorems and different types of indeterminate forms are thoroughly explained. Further the book covers the convergence and divergence of the series, tangents and normals, curvatures to the curves, maxima and minima of functions of more than one variables and directional derivatives. The text also deals with volume integrals, and concludes with a detailed discussion on the line integrals and surface integrals using divergence and Stokes’ theorems.

KEY FEATURES
- Provides more than 250 problems with answers at the end of each chapter.
- Gives adequate number of illustrations each conveying some specific concept of the subject.
- Includes a large number of fully worked-out examples in every chapter for the proper understanding of the concepts.


Latest Print 2009 / 304 pp. / 16.0 x 24.1 cm
The aim of this book is to give a thorough and systematic account of calculus of variations which deals with the problems of finding extremum or stationary values of a functional. It begins with the fundamentals and develops the subject to the level of research frontiers. The problems of theoretical physics, elasticity, heat transfer, hydrodynamics and hydromagnetics have been lucidly treated. The text is updated to include new topics such as variational principles of any non-linear problem, stochastic calculus of variations, variational inequalities and problems of optimum control.

The text is suitable as a first course in calculus of variations and also as a reference book for research workers in applied mechanics and theoretical physics.

KEY FEATURES

• Presents topics in a lucid and coherent manner that is easily comprehensible to students.
• Contains a large number of problems to acquaint the reader with various techniques for solving variational problems.
• Also, investigates several problems in hydrodynamics and hydromagnetics which have important engineering and technological applications.


Latest Print 2014 / 256 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-1120-6 / 225.00

Primarily intended for the undergraduate students in Mathematics, Physics and Engineering, this text gives in-depth coverage of differential equations and the methods of solving them.

The book begins with the basic definitions, the physical and geometric origins of differential equations, and the methods for solving first-order differential equations. Then it goes on to give the applications of these equations to such areas as biology, medical sciences, electrical engineering and economics. The text also discusses, systematically and logically, higher-order differential equations and their applications to telecommunications, civil engineering, cardiology and detection of diabetes, as also the methods of solving simultaneous differential equations and their applications.

This book fusion of theory and application is useful for postgraduate students.

NEW TO THE SECOND EDITION

• A section (Section 5.11): Series Solution of a Differential Equation-Frobenius Method.
• A chapter (Chapter 10): Calculus of Variations and Its Applications.


Latest Print 2013 / 528 pp. / 16.0 × 24.1 cm
SCIENTES AND MATHEMATICS
Mathematics (CALCULUS)

Introduction to Partial Differential Equations, 3rd ed.

K. SANKARA RAO, Formerly Professor of Mathematics, Anna University, Chennai had earlier been Scientist/Engineer at Tata Institute of Fundamental Research, Bombay and Vikram Sarabhai Space Centre, Trivandrum.

This comprehensive and well-organized book, now in its Third Edition, continues to provide the students with the fundamental concepts, the underlying principles, various well-known mathematical techniques and methods such as Laplace and Fourier transform techniques, the variable separable method, and Green's function method to solve partial differential equations.

The text is supported by a number of worked-out examples and miscellaneous examples to enable the students to assimilate the fundamental concepts and the techniques for solving partial differential equations with various initial and boundary conditions. Besides, chapter-end exercises are also provided with hints to reinforce the students' skill.

It is designed primarily to serve as a textbook for senior undergraduate and postgraduate students pursuing courses in applied mathematics, physics and engineering. Students appearing in various competitive examinations like NET, GATE, and the professionals working in scientific R&D organizations would also find this book both stimulating and highly useful.

What is new to this edition?
• Adds new sections on linear partial differential equations with constant coefficients and non-linear model equations.
• Offers additional worked-out examples and exercises to illustrate the concepts discussed.


Introduction to Differential Equations

RABINDRA KUMAR PATNAIK, Vice-Chancellor, The ICFAI University, Tripura.

This book provides students with solid knowledge of the basic principles of differential equations and a clear understanding of the various ways of obtaining their solutions by applying suitable methods. It is primarily intended to serve as a textbook for undergraduate students of mathematics. It will also be useful for undergraduate engineering students of all disciplines as part of their course in engineering mathematics.

No book on differential equations is complete without a treatment of special functions and special equations. A chapter in this book has been devoted to the detailed study of special functions such as the gamma function, beta function, hypergeometric function, and Bessel function, as well as special equations such as the Legendre equation, Chebyshev equation, Hermite equation, and Laguerre equation. The general properties of various orthogonal polynomials such as Legendre, Chebyshev, Hermite, and Laguerre have also been covered.

A large number of solved examples as well as exercises at the end of many chapter sections help to comprehend as well as to strengthen the grasp of the underlying concepts and principles of the subject. The answers to all the exercises are provided at the end of the book.


Latest Print 2009 / 292 pp. / 16.0 x 24.1 cm

Introduction to Partial Differential Equations, 3rd ed.

RABINDRA KUMAR PATNAIK, Vice-Chancellor, The ICFAI University, Tripura.

This book provides students with solid knowledge of the basic principles of differential equations and a clear understanding of the various ways of obtaining their solutions by applying suitable methods. It is primarily intended to serve as a textbook for undergraduate students of mathematics. It will also be useful for undergraduate engineering students of all disciplines as part of their course in engineering mathematics.

No book on differential equations is complete without a treatment of special functions and special equations. A chapter in this book has been devoted to the detailed study of special functions such as the gamma function, beta function, hypergeometric function, and Bessel function, as well as special equations such as the Legendre equation, Chebyshev equation, Hermite equation, and Laguerre equation. The general properties of various orthogonal polynomials such as Legendre, Chebyshev, Hermite, and Laguerre have also been covered.

A large number of solved examples as well as exercises at the end of many chapter sections help to comprehend as well as to strengthen the grasp of the underlying concepts and principles of the subject. The answers to all the exercises are provided at the end of the book.


Latest Print 2009 / 292 pp. / 16.0 x 24.1 cm

PHI Learning: Publications 234
This systematically-organized text on the theory of differential equations deals with the basic concepts and the methods of solving ordinary differential equations. Various existence theorems, properties of uniqueness, oscillation and stability theories, have all been explained with suitable examples to enhance students’ understanding of the subject.

The book also discusses in sufficient detail the qualitative, the quantitative, and the approximation techniques, linear equations with variable and constants coefficients, regular singular points, and homogeneous equations with analytic coefficients. Finally, it explains Riccati equation, boundary value problems, the Sturm–Liouville problem, Green’s function, the Picard’s theorem, and the Sturm–Picone theorem. The text is supported by a number of worked-out examples to make the concepts clear, and it also provides a number of exercises help students test their knowledge and improve their skills in solving differential equations.

The book is intended to serve as a text for the postgraduate students of mathematics and applied mathematics. It will also be useful to the candidates preparing to sit for the competitive examinations such as NET and GATE.


Latest Print 2013 / 420 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4666-6 / 350.00

This book presents the theoretical concepts of methods of solutions of ordinary and partial differential equations as well as equips the students with the various tools and techniques to model different physical problems using such equations.


It also covers Bessel’s and Legendre’s equations and functions, and the Laplace transform. Finally, the book revisits partial differential equations to solve the Laplace equation, wave equation and diffusion equation, and discusses the methods to solve partial differential equations using the Fourier transform.

A large number of solved examples as well as exercises at the end of chapters help the students comprehend and strengthen the underlying concepts.

The book is intended for undergraduate and postgraduate students of Mathematics (B.A./B.Sc., M.A./M.Sc.), and undergraduate students of all branches of engineering (B.E./B.Tech.), as part of their course in Engineering Mathematics.


Latest Print 2010 / 440 pp. / 17.8 × 23.5 cm
Partial Differential Equations: An Introductory Treatment with Applications

K.S. BHAMRA, Professor, Department of Mathematics, Manipur University.

This book presents comprehensive coverage of the fundamental concepts and applications of partial differential equations (PDEs). It is designed for the undergraduate [BA/BSc (Hons.)] and postgraduate (MA/MSc) students of mathematics, and conforms to the course curriculum prescribed by UGC.

The text is broadly organized into two parts. The first part (Lessons 1 to 15) mostly covers the first-order equations in two variables. In these lessons, the mathematical importance of PDEs of first order in physics and applied sciences has also been highlighted. The other part (Lessons 16 to 50) deals with the various properties of second-order and first-order PDEs.

The book emphasizes the applications of PDEs and covers various important topics such as the Hamilton–Jacobi equation, Conservation laws, Similarity solution, Asymptotics and Power series solution and many more. The graded problems, the techniques for solving them, and a large number of exercises with hints and answers help students gain the necessary skill and confidence in handling the subject.

KEY FEATURES
• Presents self-contained topics in a cohesive style.
• Includes about 300 worked-out examples to enable students to understand the theory and inherent aspects of PDEs.
• Provides around 450 unsolved problems with hints and answers to help students assess their comprehension of the subject.

Calculus is a powerful mathematical tool with applications in almost every branch of science and engineering. This subject is therefore considered to occupy the central position in mathematics.

The second edition of Textbook of Differential Calculus is updated and designed as per the latest syllabi of various Indian universities for undergraduate courses in mathematics. Calculus is best understood via geometry. A major section of the text is devoted to topics on geometrical applications of calculus that includes treatment of topics such as tangents and normals to curves, curvature, asymptotes, maxima and minima of functions.

KEY FEATURES
• Contents match with the latest syllabus of Indian universities.
• A large number of solved examples, section-end questions and theorems help build an intuitive understanding of mathematics.
• Questions have been selected from previous years’ examination papers.
• Multiple-choice questions, with answers, at the end of the book, help students prepare for competitive examinations.

CONTENTS:

C.R. MONDAL, Lecturer, Department of Mathematics, North-Eastern Hill University, Shillong.

Written in a clear, precise and readable manner, this textbook (now revised and corrected) is designed to provide postgraduate mathematics students with a sound and inspiring introduction to the main themes of ordinary differential equations. It is presented from the viewpoint of applied mathematics to treat differential equations both from the theoretical background and practical applications to scientific and engineering problems.

Beginning with a comprehensive treatment of linear differential equations with variable coefficients, the text gives a detailed discussion on some well-known special functions which provide solutions of second-order linear ordinary differential equations having several regular singular points. Many of the standard concepts and methods which are useful in the study of special functions are discussed. The properties of special functions are derived from their differential equations and boundary conditions. Finally, existence and uniqueness of solutions of differential equations are established.

Worked-out examples are introduced throughout the text. End-of-chapter exercises further help understand the mathematical and physical structure of the subject.


Latest Print 2009 / 192 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3467-0 / ₹ 175.00
Textbook of Tensor Calculus and Differential Geometry

G. Aruldhas, former Professor and Head of Physics Department, and former Dean of Faculty of Science, University of Kerala.

This book offers an in-depth presentation of the mechanics of particles and systems. The material is thoroughly class-tested and hence eminently suitable as a textbook for a one-semester course in Classical Mechanics for postgraduate students of physics and mathematics. Besides, the book can serve as a useful reference for engineering students at the postgraduate level.

The book provides not only a complete treatment of classical theoretical physics, but also an enormous number of worked examples and problems to show students clearly how to apply abstract principles and mathematical techniques to realistic problems. While abstraction of theory is minimized, detailed mathematical analysis is provided wherever necessary.

Besides an all-embracing coverage of different aspects of classical mechanics, the rapidly growing areas of nonlinear dynamics and chaos are also included. The chapter on Central Force Motion includes topics like satellite parameters, orbital transfers and scattering problem. An extensive treatment of the essentials of small oscillations, which is crucial for the study of molecular vibrations, is included. Rigid body motion and special theory of relativity are also covered in two separate chapters.

KEY FEATURES
- Contains 250 worked out examples
- Includes more than 350 unsolved problems
- Gives thorough foundation in Tensors


Latest Print 2012 / 552 pp. / 17.8 × 23.5 cm

PHI Learning: Publications
C.R. MONDAL, Lecturer, Department of Mathematics, North-Eastern Hill University, Shillong.

Intended for postgraduate students of mathematics, the revised edition of this compact textbook helps readers acquire a thorough understanding of the basic concepts of classical mechanics.

The text is organized into five chapters. After a comprehensive introduction to the terminologies of dynamical systems and generalized coordinates, Lagrange's equations of motion for holonomic systems, and conservative and non-holonomic systems are developed. The text then gives a detailed coverage of the Euler–Lagrange equation, equations of motion of rigid bodies, and Hamilton’s equations of motion, suitably reinforced with examples to enhance learning. Finally, canonical transformations and Hamilton’s equations of motion in Poisson’s bracket are discussed along with the Hamilton–Jacobi theory and the Hamilton–Jacobi equation for Hamilton’s principal function.

Numerous worked-out examples included throughout the text and end-of-chapter exercises will be of considerable help to the students in comprehending the application of the principles to physical problems.


K. SANKARA RAO, was formerly Professor of Mathematics, Anna University, Chennai. He also served as a Senior Scientist/Engineer, Applied Mathematics Division of Vikram Sarabhai Space Centre (VSSC), Trivandrum.

This comprehensive and well-organized text explains the principles of mechanics in as simple language as possible. The text starts with Newton’s laws of motion, units and dimension and dynamics of a system of particles, and rotating frame of reference. Then kinematics of a rigid body motion and Eulerian angles are discussed, together with the dynamics of a rigid body in space and orbital motion. The text then goes on to describe Lagrange and Hamilton methods and the special theory of relativity. New topics such as rocket dynamics along with vehicle optimization and three-body and n-body problems are also presented.

Typical solved examples and exercises are included in each chapter. Multiple-choice questions given at the end of the text are taken from examination papers of various Indian universities, GATE and other competitive examinations.

The book is intended for postgraduate students of mathematics, physics, and engineering, particularly in aerospace, civil and mechanical engineering.


Classical Mechanics: Analytical Dynamics

R.N. TIWARI, former Professor of Mathematics at Government College of Science, Pt. Ravishankar Shukla University, Raipur (C书画村).

B.S. THAKUR, Lecturer, School of Studies in Mathematics, Pt. Ravishankar Shukla University, Raipur.

Intended as a text for postgraduate students of mathematics, this compact and well-organized book offers insights into the principles of classical mechanics and, in particular, deals with the problems of dynamical systems.

Divided into seven chapters, the text begins with a discussion on some elementary results of statics and dynamics. It then goes on to analyze at length the Hamiltonian formulation along with the Poisson bracket, the variational principle (taking Euler's equation of calculus of variation as the base), and different forms of the variational principle. Finally, the text explains the integral invariants, canonical transformations, and the Hamilton–Jacobi theory.

KEY FEATURES
- A fairly large number of worked-out examples are interspersed throughout the text to illustrate the application of the concepts to the problems discussed.
- Miscellaneous Exercises are given at the end of the book to drill the students in self-study.
- The text entirely covers UGC model curriculum for M.Sc. (Mathematics).


Complex Variables: Theory and Applications, 2nd ed.

H.S. KASANA, Formerly, Professor and Head, Department of Mathematics and Computer Applications, Thapar Institute of Engineering and Technology, Patiala.

The second edition of this comprehensive and accessible text continues to offer students a challenging and enjoyable study of complex variables that is infused with perfect balanced coverage of mathematical theory and applied topics.

The author explains fundamental concepts and techniques with precision and introduces the students to complex variable theory through conceptual development of analysis enabling them to develop a thorough understanding of the topics discussed. Geometric interpretation of the results, wherever necessary, has been inducted for making the analysis more accessible. The level of the text assumes that the reader is acquainted with elementary real analysis.

Beginning with the revision of the algebra of complex variables, the book moves on to deal with analytic functions, elementary functions, complex integration, sequences, series and infinite products, series expansions, singularities and residues. The application-oriented chapters on sums and integrals, conformal mappings, Laplace transform, and some special topics, provide a practical-use perspective. Enriched with many numerical examples and exercises designed to test the student’s comprehension of the topics covered, this book is written for a one-semester course in complex variables for students in the science and engineering disciplines.


Latest Print 2013 / 504 pp. / 17.8 × 23.5 cm
Ordinary Differential Equations, 2nd ed.

Purna Chandra Biswal, Assistant Professor of Mathematics at Parala Maharaja Engineering College, Berhampur, Odisha.

This thoroughly revised text, now in its Second Edition, continues to provide a comprehensive treatment of the principal topics of ordinary differential equations, special functions and Laplace transform, and demonstrates the utility of the subject through a variety of applications to engineering problems.

The text provides detailed logical explanations of the subject’s theoretical foundations, while at the same time helping students develop strong problem-solving skills. In addition, a large number of solved examples interspersed throughout the text help in providing the students with an in-depth insight into the underlying concepts and their applicability to solutions of problems in engineering and physical sciences.

The book is intended to serve as a textbook for undergraduate students of mathematics as well as all branches of engineering.

NEW TO THE SECOND EDITION

- Contains two new sections, one on Methods of Regrouping and another on Independent Functions.
- Includes numerous solved problems and chapter-end exercises with hints.


Latest Print 2012 / 384 pp. / 17.8 x 23.5 cm ISBN-978-81-203-4622-2 / ₹ 295.00
Differential Geometry of Manifolds

QUDDUS KHAN, Senior Assistant Professor in the Department of Mathematics, Shibil National Postgraduate College, Azamgarh (UP).

Curves and surfaces are objects that everyone can see, and many of the questions that can be asked about them are natural and easily understood. Differential geometry is concerned with the precise mathematical formulation of some of these questions, while trying to answer them using calculus techniques. The geometry of differentiable manifolds with structures is one of the most important branches of modern differential geometry.

This well-written book discusses the theory of differential and Riemannian manifolds to help students understand the basic structures and consequent developments. While introducing concepts such as bundles, exterior algebra and calculus, Lie group and its algebra and calculus, Riemannian geometry, submanifolds and hypersurfaces, almost complex manifolds, etc., enough care has been taken to provide necessary details which enable the reader to grasp them easily. The material of this book has been successfully tried in classroom teaching.

The book is designed for the postgraduate students of Mathematics. It will also be useful to the researchers working in the field of differential geometry and its applications to general theory of relativity and cosmology, and other applied areas.

KEY FEATURES

• Provides basic concepts in an easy-to-understand style.
• Presents the subject in a natural way.
• Follows a coordinate-free approach.
• Includes a large number of solved examples and illuminating illustrations.
• Gives notes and remarks at appropriate places.

CONTENTS:


Advanced Discrete Mathematics

UDAY SINGH RAJPUT, Assistant Professor in the Department of Mathematics and Astronomy, Lucknow University, Lucknow.

Written in an accessible style, this text provides a complete coverage of discrete mathematics and its applications at an appropriate level of rigour.

The book discusses algebraic structures, mathematical logic, lattices, Boolean algebra, graph theory, automata theory, grammars and recurrence relations. It covers the important topics such as coding theory, Dijkstra’s shortest path algorithm, reverse polish notation, Warshall’s algorithm, Menger’s theorem, Turing machine, and LR(k) parsers, which form a part of the fundamental applications of discrete mathematics in computer science. In addition, Pigeonhole principle, ring homomorphism, field and integral domain, trees, network flows, languages, and recurrence relations. The text is supported with a large number of examples, worked-out problems and diagrams that help students understand the theoretical explanations.

The book is intended as a text for postgraduate students of mathematics, computer science, and computer applications. In addition, it will be extremely useful for the under-graduate students of computer science and engineering.

CONTENTS:


Latest Print 2012 / 400 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4589-8 / ` 350.00

PHI Learning: Publications 242
Discrete Mathematics and Graph Theory, 3rd ed.

N. CHANDRASEKARAN, has been Professor of Mathematics at St. Joseph’s College, Tiruchirapalli.

M. UMAPARVATHI, has been Professor of Mathematics at SreeBalakshmi Ramaswami College, Tiruchirapalli.

Written with a strong pedagogical focus, this book is an exhaustive presentation of the fundamental concepts of discrete mathematical structures and their applications in computer science and mathematics. It aims to develop the ability of the students to apply mathematical thought in order to solve computation-related problems. The book is intended not only for the undergraduate and postgraduate students of mathematics but also, most importantly, for the students of Computer Science & Engineering and Computer Applications.

The introductory chapter presents an overview of the foundations of the subject, consisting of topics such as logic, set theory, relations, functions, algebraic structures, and graphs. The subsequent chapters provide detailed coverage of each of these topics as well as major areas of discrete mathematics such as combinatorics, lattices and Boolean algebras. Major applications such as computer models and computation, coding theory, cryptography and databases are dealt with in the final chapters of the book.

The book is replete with features which enable the building of a firm foundation of the underlying principles of the subject and also provide adequate scope for testing the comprehension acquired by the students. Each chapter contains numerous worked-out examples within the main discussion as well as several chapter-end Supplementary Examples for revision. The Self-Test and Exercises at the end of each chapter provide large numbers of objective type questions and problems respectively. Answers to objective type questions and hints to exercises are also provided. All these pedagogic features, together with thorough coverage of the subject matter, make this book a very readable text for beginners as well as advanced learners of the subject.


Discrete Mathematics

PURNA CHANDRA BISWAL, Assistant Professor of Mathematics at Parala Maharaja Engineering College, Berhampur, Odisha.

This textbook, now in its third edition, continues to provide an accessible introduction to discrete mathematics and graph theory.

The introductory material on Mathematical Logic is followed by extensive coverage of combinatorics, recurrence relation, binary relations, coding theory, distributive lattice, bipartite graphs, trees, algebra, and Polya’s counting principle. A number of selected results and methods of discrete mathematics are discussed in a logically coherent fashion from the areas of mathematical logic, set theory, combinatorics, binary relation and function, Boolean lattice, planarity, and group theory. There is an abundance of examples, illustrations and exercises spread throughout the book. A good number of problems in the exercises help students test their knowledge.

The text is intended for the undergraduate students of Computer Science and Engineering as well as students of Mathematics and those pursuing courses in the areas of Computer Applications and Information Technology.

NEW TO THE THIRD EDITION
• Includes a new chapter (Chapter 2) on Methods of proof.
• Contains new sections on Enumeration of graphs, Branching process in enumerating trees, Pseudo Boolean lattice, and Subgroup.
• Redistributes most of the problems given in exercises section-wise.
• Provides many examples and exercises.
• Gives elaborate hints for solving exercise problems.


Latest Print 2013 / 704 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4691-8 / 450.00

PHI Learning: Publications
Discrete Mathematics and Graph Theory, 2nd ed.

BHAVANARI SATYANARAYANA, Professor of Mathematics at Acharya Nagarjuna University, Nagarjuna Nagar, Andhra Pradesh.

This comprehensive and self-contained text provides a thorough understanding of the concepts and applications of discrete mathematics and graph theory. It is written in such a manner that beginners can develop an interest in the subject. Besides providing the essentials of theory, the book helps develop problem-solving techniques and sharpens the skill of thinking logically.

The book is organized in two parts. The first part on discrete mathematics covers a wide range of topics such as predicate logic, recurrences, generating function, combinatorics, partially ordered sets, lattices, Boolean algebra, finite state machines, finite fields, elementary number theory and discrete probability. The second part on graph theory covers planarity, colouring and partitioning, directed and algebraic graphs.

In the Second Edition, more exercises with answers have been added in various chapters. Besides, an appendix on languages has also been included at the end of the book.

The book is intended to serve as a textbook for undergraduate engineering students of computer science and engineering, information communication technology (ICT), and undergraduate and postgraduate students of mathematics. It will also be useful for undergraduate and postgraduate students of computer applications.

KEY FEATURES

- Provides algorithms and flow charts to explain several concepts.
- Gives a large number of examples to illustrate the concepts discussed.
- Includes many worked-out problems to enhance the student’s grasp of the subject.
- Provides exercises with answers to strengthen the student’s problem-solving ability.


Fundamentals of Discrete Mathematical Structures, 2nd ed.

K.R. CHOWDHARY, Professor and Head in the Department of Computer Science and Engineering, M.B.M. Engineering College, Jodhpur.

This thoroughly revised and updated text, now in its Second Edition, continues to provide the basic concepts of discrete mathematics and its applications at an appropriate level of rigour.

The text teaches mathematical logic, discusses how to work with discrete structures, analyzes combinatorial approach to problem-solving and develops an ability to create and understand mathematical models and algorithms essentials for writing computer programs. Every concept introduced in the text is first explained from the point of view of mathematics, followed by its relation to Computer Science. In addition, it offers excellent coverage of graph theory, mathematical reasoning, foundational material on set theory, relations and their computer representation, supported by a number of Worked-out Examples and Exercises to reinforce the students’ skill.

Primarily intended for undergraduate students of Computer Science and Engineering, and Information Technology, this text will be also useful for undergraduate and postgraduate students of Computer Applications.

NEW TO THIS EDITION

- Contains many new sections such as Russell’s paradox, injection, surjection, bijection, Schroeder-Bernstein theorem, graph and map coloring, and Bipartite graph.
- Includes more questions in chapter-end Exercises.


Latest Print 2012 / 312 pp. / 17.8 x 23.5 cm
This is a sequel to the author’s earlier books—Engineering Mathematics: Vols. I and II—both well received by the students and the academics. As this book deals with advanced topics in engineering mathematics, which undergraduate students in engineering and postgraduate students in mathematics and allied disciplines have to study as part of their course requirements, the title of Advanced Engineering Mathematics has been considered more suitable.

This well-organized and accessible text discusses in detail the advanced mathematical tools and techniques required for engineering problems. The book begins with Fourier series and goes on to give an in-depth analysis of Fourier transforms, Mellin transforms and Z-transforms. It then examines the partial differential equations with an emphasis on the method of separation of variables applied to the solution of initial boundary value problems involving the heat, wave and Laplace equations.

Discrete mathematics and its applications are covered in a separate chapter as the subject has wide applications in computer science. In addition, the book presents some of the classical problems of the calculus of variations, including the brachistochrone problem. The text concludes with a discussion on tensor analysis which has important applications in the study of continuum mechanics, theory of relativity, and elasticity.

Intended primarily as a text for undergraduate students of engineering, postgraduate students of mathematics (M.Sc.), and master of computer applications (MCA), the book would be of great benefit also to practising engineers.

KEY FEATURES
- The topics given are application-oriented, and are selected keeping in view their use in various engineering disciplines.
- Exercises are provided at the end of each section to test the student’s comprehension.
- A large number of illustrative examples are given to help students understand the concepts better.


Latest Print 2014 / 488 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3609-4 / £ 325.00
A. GANGADHARAN, Dean in the Department of Mathematics, Easwari Engineering College, Ramapuram, Chennai.

This well-received book, now in its second edition, is intended for the undergraduate engineering students of all branches. The book is designed in such a manner that even an average student can comprehend the subject with ease. The text begins with the Fourier series expansions and harmonic analysis. The formation and solution of partial differential equations and their applications in elastic string, one- and two-dimensional heat flow are explained in detail. Also, the book deals with Fourier transforms, including sine and cosine transforms and their properties. The text concludes with Z transform and its application in solving difference equations.

This new edition includes a large number of carefully selected two-mark questions with their solutions as well as a Question Bank containing important questions from all the chapters.

KEY FEATURES
• Concise and clear presentation of basic concepts
• Step-by-step derivation of results
• Variety of problems arranged in a graded manner
• Practice exercises at the end of each section
• Answers to unsolved problems


S.S. SASTRY, was a Scientist/Engineer SF in the Applied Mathematics Division of Vikram Sarabhai Space Centre, Trivandrum, Kerala.

The Fourth Edition of this well-received book continues to serve as a basic text for beginning students of engineering of all branches. The new edition is largely revised and rewritten keeping in mind the recent changes in the Engineering Mathematics curriculum.

What distinguishes the new edition is the addition of many new examples and exercises drawn from the AMIE and IIT-JEE papers.

The book begins with a detailed discussion on higher algebra, geometry, vectors and complex numbers. The text then goes on to give an indepth analysis of geometry, vectors and complex numbers; applications of differential calculus; integration; and ordinary differential equations of the first order. The book concludes with a thorough treatment of numerical methods — a significant area of engineering mathematics.

WHAT'S NEW TO THIS EDITION
• A new Chapter (Chapter 5) on Ordinary differential equations of the First Order.
• Two sections on Diagonalization by Orthogonal Transformation, and Quadratic Forms (Chapter 1).
• Sections on Analytical Geometry of Three Dimensions (Chapter 2).
• Section on Numerical Methods for First Order Differential Equations (Chapter 5).
• Provides Answers to more exercise, which are now given at the end of each chapter.

With these additions and revisions, the book should appeal not only to students of engineering but also to practicing engineers and scientists.

S.S. SASTRY, was a Scientist/Engineer SF in the Applied Mathematics Division of Vikram Sarabhai Space Centre, Trivandrum, Kerala.

The Fourth Edition of this accessible and student-friendly book continues to serve as a basic text for engineering students as part of their course in engineering mathematics. The new edition has substantial revisions and modifications, in light of the recent changes in the mathematics syllabi of engineering colleges/institutes.

Volume 2 focuses on differential equations of the second order, Laplace transforms, and inverse Laplace transforms and their applications to differential equations. It provides an in-depth analysis of functions of several variables and presents, in an easy-to-understand style, double, triple and improper integrals. The book also covers in detail vector analysis and the functions of a complex variable and has a fairly detailed discussion on advanced numerical methods.

NEW TO THIS EDITION
• Two new chapters (Chapters 3 and 4) on Functions of Several Variables and Multiple Integrals.
• Three new sections on Elastic Curves, Electric Circuits, and Matrix Methods for Systems of Linear Differential Equations (Chapter 1)
• New sections on Jacobians (Chapter 3) and Green’s Theorem in a Plane (Chapter 5)
• Answers to more exercises, given at the end of each chapter.
• Several new illustrative examples and exercises.

With these additions, including the many pedagogic features—both existing and new ones—the text should prove to be highly useful to students of engineering and should also benefit practising engineers and scientists.

CONTENTS:

Latest Print 2014 / 624 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3617-9 / ₹ 350.00

M. THAMBAN NAIR, Professor of Mathematics at Indian Institute of Technology Madras, Chennai.

Intended as an introductory-level text on Functional Analysis for the postgraduate students in Mathematics, this compact and well-organized text covers all the topics considered essential to the subject. The book begins with a review of linear algebra, and then it goes on to give the basic notion of a norm on linear space (proving thereby most of the basic results), progresses gradually, dealing with operators, and proves some of the basic theorems of Functional Analysis. Besides, the book analyzes more advanced topics like dual space considerations, compact operators, and spectral theory of Banach and Hilbert space operators.

KEY FEATURES
• Plenty of examples have been worked out in detail, which not only illustrate a particular result, but also point towards its limitations so that subsequent stronger results follow.
• Exercises, which are meant to aid understanding and to promote mastery of the subject, are interspersed throughout the text.

This student friendly text, with its clear exposition of concepts, should prove to be a boon to the beginner aspiring to have an insight into Functional Analysis.


Latest Print 2014 / 448 pp. / 16.0 × 24.1 cm
This well-received book, which is a new edition of Textbook of Engineering Mathematics: Special Functions and Complex Variables by the same author, continues to discuss two important topics—special functions and complex variables. It analyzes special functions such as gamma and beta functions, Legendre’s equation and function, and Bessel’s function. Besides, the text explains the notions of limit, continuity and differentiability by giving a thorough grounding on analytic functions and their relations with harmonic functions. In addition, the book introduces the exponential function of a complex variable and, with the help of this function, defines the trigonometric and hyperbolic functions and explains their properties.

While discussing different mathematical concepts, the book analyzes a number of theorems such as Cauchy’s integral theorem for the integration of a complex variable, Taylor’s theorem for the analysis of complex power series, the residue theorem for evaluation of residues, besides the argument principle and Rouche’s theorem for the determination of the number of zeros of complex polynomials. Finally, the book gives a thorough exposition of conformal mappings and develops the theory of bilinear transformation.

Intended as a text for engineering students, this book will also be useful for undergraduate and postgraduate students of Mathematics and students appearing in competitive examinations.

WHAT IS NEW TO THIS EDITION
- Chapters have been reorganized keeping in mind changes in the syllabi.
- A new chapter is exclusively devoted to Graph Theory.

Reflecting the tremendous advances that have taken place in the study of fuzzy set theory and fuzzy logic, this book not only details the theoretical advances in these areas, but also considers a broad variety of applications of fuzzy sets and fuzzy logic.

This comprehensive and up-to-date text is organized in three parts. The concepts pertaining to the “crisp” situation such as Set Theory, Logic, Switching Function Theory and Boolean Algebra are covered in Part I of the text. Part II is devoted to Fuzzy Set Theory, Fuzzy Relations and Fuzzy Logic. The applications of fuzzy set theory and fuzzy logic to Control Theory and Decision Making are designated Part III of the text.

Designed as a textbook for the undergraduate and postgraduate students of Science and Engineering, the book will also be immensely useful to practicing engineers and computer scientists.

**KEY FEATURES**

- Every concept has been illustrated with worked out examples.
- Fuzzy concepts have been introduced as generalizations and extensions of crisp concepts.
- Each chapter concludes with Problem Set and References.


Latest Print 2011 / 256 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-2861-7 / $195.00

**Introduction to Fuzzy Sets and Fuzzy Logic**

M. GANESH, Professor, Mathematics Group, Birla Institute of Technology and Science (BITS), Pilani.

Designed primarily as a text for senior undergraduate students of Computer Science and Engineering, and postgraduate students of Mathematics and Applied Mathematics, this compact book describes the theoretical aspects of fuzzy set theory and fuzzy logic.

Based on his many years of experience, Professor Rajjan Shinghal gives a succinct analysis of the procedures for fuzzy sets complementation, intersection, and union. He also explains clearly how arithmetic operations are carried out on approximate numbers, how fuzzy sets are used for reasoning, and how they are employed for unsupervised learning. Finally, the book shows how fuzzy sets are utilized in applications such as logic control, databases, information retrieval, ordering of objects, and satisfying multiple goals.

Besides students, professionals working in research organizations should find the book quite useful.


Latest Print 2013 / 144 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4699-4 / $150.00
SCIENCES AND MATHEMATICS
Mathematics (Graph Theory)

Graph Theory

G. SURESH SINGH is Reader, Department of Mathematics, University of Kerala, Trivandrum.

Graphical representations have given a new dimension to the problem solving exercise in diverse subjects like mathematics, bio-sciences, chemical sciences, computer science and information technology, social sciences and linguistics. This book is devoted to the models of graph theory, and the solutions provided by these models to the problems encountered in these diverse fields of study.

The text offers a comprehensive and coherent introduction to the fundamentals of graph theory, besides giving an application based approach to the subject. Divided into 13 chapters, the book begins with explicating the basics of graph theory, moving onto the techniques involved while drawing the graphs.

The subsequent chapters dwell onto the problems solved by the Ramsey table and Perfect graphs. The algebraic graphs and their concepts are also explained with great precision. The concluding chapters discuss research oriented methodologies carried out in the field of graph theory. The research works include the work done by the author himself such as on Union Graphs and Triangular Graceful Graphs, and their ramifications.

Primarily intended as a textbook for the undergraduate and postgraduate students of mathematics and computer science, this book will be equally useful for the undergraduate students of engineering. Apart from that, the book can be used as a reference by the researchers and mathematicians.

KEY FEATURES
• Incorporates numerous graphical representations in the form of well-labelled diagrams
• Presents a balanced approach with the help of worked-out examples, algorithms, definitions and remarks
• Comprises chapter-end exercises to judge students’ comprehension of the subject


Latest Print 2010 / 288 pp. / 17.8 × 23.5 cm ISBN-978-81-203-4105-0 / 250.00

PHI Learning: Publications

Group Theory and Its Applications in Chemistry

A. SALAHUDDIN KUNJU, Former Principal, University College, Thiruvananthapuram.
G. KRISHNAN, Former Principal, Government College, Chavara, Kerala.

This book presents the basic principles of group theory and their applications in chemical theories. First, it discusses the symmetry elements, point groups and construction of character tables for different point groups. The book then describes the concept of hybridization to explain the shapes of molecules and analyzes the character tables to predict infrared and Raman active vibrational modes of molecules. The book also presents in detail molecular orbital theory and methods for construction of molecular orbitals of molecules with different geometries. In addition, it elaborates techniques of group theory to interpret bonding in transition metal complexes and their electronic spectra. Finally, the book describes the crystalline point groups, Bravais lattices and space groups, as well as the Woodward–Hoffmann rules to determine the pathways of electrocyclic and cycloaddition reactions.

The book is designed for the senior undergraduate students and postgraduate students of chemistry. The researchers in the field of group theory will also find this book useful.

KEY FEATURES
• Provides mathematical foundations to understand group theory.
• Includes several examples to illustrate applications of group theory.
• Presents chapter-end exercises to help the students check their understanding of the subject matter.


Latest Print 2011 / 220 pp. / 17.8 × 23.5 cm ISBN-978-81-203-4032-9 / 250.00

PHI Learning: Publications
Introduction to Linear Algebra, An

ALKA MARWAHA, Associate Professor, Jesus and Mary College, University of Delhi.

This book is meant for an introductory course in linear algebra for undergraduate students of mathematics. It deals with the concept of vector spaces and special types of functions defined on them called linear transformations or operators. The vector spaces considered in the book are finite-dimensional, a concept that involves representation of vectors in terms of a finite number of vectors which form a basis for the vector spaces.

Written from a student’s perspective, this textbook explains the basic concepts in a manner that the student would be able to grasp the subject easily. Numerous solved examples and exercises given at the end of nearly each section will help the student to gain confidence in his/her analytical skills.

What makes this book probably stand apart from other standard books on finite-dimensional linear algebra is the introduction to Hilbert Space Theory. The generic model of a finite-dimensional Hilbert space (real or complex) is $\mathbb{R}^n$ or $\mathbb{C}^n$ but the true relevance of operators in Hilbert spaces surfaces only when they are infinite-dimensional. In order to properly comprehend the structure of an infinite-dimensional Hilbert space, it is important to grasp it at the finite-dimensional level. Although finite-dimensional Hilbert spaces are discussed comprehensively in the first eight chapters, it is only in the last three chapters that the treatment of Hilbert spaces is given in a setting which can be easily extended to defining infinite-dimensional Hilbert spaces. After going through this textbook, the students will have a clear understanding of the model of a Hilbert space in finite-dimensions and will then be able to smoothly make the transition to infinite-dimensional Hilbert Space Theory.


Latest Print 2014 / 312 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4952-0 / 225.00

Linear Algebra: A Geometric Approach

S. KUMARESAN, Professor, Department of Mathematics and Statistics, University of Hyderabad, Hyderabad.

This concise and highly readable text is designed for a first course in linear algebra and is intended for undergraduate courses in mathematics. It focusses throughout on geometric explanations to make the student perceive that linear algebra is nothing but analytic geometry of $n$ dimensions. Linear algebra is presented as an extension of the theory of simultaneous linear equations and their geometric interpretation is shown to be a recurring theme of the subject. The integration of abstract algebraic concepts with the underlying geometric notions is one of the distinguishing features of this book—designed to help students in the pursuit of multi-variable calculus and differential geometry in subsequent courses.

Explanations and concepts are logically presented in a conversational tone and well-constructed writing style so that students at a variety of levels can understand the material and acquire a solid foundation in the basic skills of linear algebra.

KEY FEATURES
- Entices students to geometric way of thinking about linear algebra.
- Includes about 100 solved examples for consolidation of the important concepts introduced.
- Gives about 400 exercises of various levels of difficulty to prepare students for original thinking.


Latest Print 2014 / 232 pp. / 15.3 x 22.9 cm
ISBN-978-81-203-1628-7 / 225.00
Matrix and Linear Algebra: Aided with MATLAB, 2nd ed.

KANTI B. DATTA, Department of Electrical Engineering, Indian Institute of Technology Kharagpur.

The present book, renamed Matrix and Linear Algebra: Aided with MATLAB, is a completely re-organized, thoroughly revised and fully updated version of the author’s earlier book Matrix and Linear Algebra.

This second edition of the well-received textbook, propelled by the motivation of introducing MATLAB for the study of the numerical aspect of matrix theory, has been developed after taking into account the recent changes in university syllabi, additional pedagogic features needed, as well as the latest developments in the subject areas of Matrix Algebra and Linear Algebra. The use of MATLAB macros throughout the book is the most interesting feature of this edition. Besides, the second edition significantly improves the coverage of all major topics in the two allied subject areas, such as the topics on matrices, determinants, vector spaces, bilinear transformations, and numerical techniques, that were presented in the first edition.

NEW TO THE SECOND EDITION
- Sections on
  - MATLAB operations (at the end of most chapters)
  - Square root, sine, cosine, and logarithm of a matrix
  - Solution of vector-matrix differential equations
- Extensively revised presentation of a section on decomposition of root subspaces
- Enhanced discussion of many existing topics
- Increased numbers of chapter-end problems and worked-out examples
- Many redrawn figures for greater clarity
- An exhaustive Solutions Manual for instructors teaching this subject.

The book is highly suitable for undergraduate and postgraduate students of Mathematics, Statistics, and all engineering disciplines. It will also be a useful reference for researchers and professionals in these fields.


Latest Print 2014 / 672 pp. / 17.8 × 23.5 cm

Linear Programming and Game Theory

DIPAK CHATTERJEE, former faculty, St. Xavier’s College, Kolkata.

This compact book is an excellent elucidation of the basics of optimization theory in the areas of linear programming and game theory. The theory has been developed in a systematic manner with a recapitulation of the necessary mathematical preliminaries including in good measure the elements of convexity theory. All the essential topics such as simplex algorithm, duality, revised simplex method, two-phase method and dual simplex method have been discussed lucidly. The age-old transportation and assignment problems have been treated thoroughly to manifest all the dimensions of the problems. Finally, the game theory comes with grandeur of reality of conflicts.

This user-friendly text is designed for the undergraduate students in mathematics. Besides, it will be useful to students pursuing courses in engineering, management and economics.


Latest Print 2011 / 320 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-2677-4 / ₹ 250.00
For better understanding and utilization of the modern computational techniques, it is necessary to be conversant with the formulations of mathematical analysis, especially the numerical and statistical analysis.

This book presents various numerical methods in a simple and useful form to the students and researchers who are interested in solving complex scientific and engineering problems. The text discusses in detail the basic numerical methods such as Wegstein, Newton, Jordan, Gauss-Seidel, Householder, Golub and Robbins-Monro, Conjugate Gradient, Preconditioning by Incomplete Decomposition, Least Squares, and Levenberg-Marquardt.

To fully comprehend the theory, many real-life problems from the areas of electricity, hydraulics, management, strength of materials, electronics etc. are considered at the end of each chapter and are completely worked-out by using these methods.

This profusely illustrated text is designed as a textbook for advanced undergraduate and postgraduate students in mathematics, computer science, and electrical and industrial engineering.

**KEY FEATURES**
- Measure theory and probability are well integrated.
- Exercises are given at the end of each chapter, with solutions provided separately.
- A section is devoted to large sample theory of statistics, and another to large deviation theory (in the Appendix).

**CONTENTS:**

Latest Print 2012 / 240 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4385-6 / 225.00

A. GOURDIN, Scientist in E.N.S.E.A.
M. BOUMAHRAT, Director at I.N.G.M., Boumerdès, both are Faculties in the Engineering School of El-Harrach, France.

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**CONTENTS:**

Latest Print 2012 / 240 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4385-6 / 225.00
Computer Oriented Numerical Methods, 3rd ed.

V. RAJARAMAN, Honorary Professor, Supercomputer Education and Research Centre, Indian Institute of Science, Bangalore.

This book is a concise presentation of the basic concepts used in evolving numerical methods with special emphasis on developing computational algorithms for solving problems in algebra and calculus on a computer.

It is written for undergraduate science and engineering students who have taken a first course in differential and integral calculus. The approach is to ensure conceptual understanding of the numerical methods by relying on students’ geometric intuition.

The book provides coverage of iterative methods for solving algebraic and transcendental equations, direct and iterative methods of solving simultaneous algebraic equations, numerical methods for differentiation and integration, and solution of ordinary differential equations with initial conditions.

The formulation of algorithms is illustrated with a number of solved examples and an algorithmic language based on English (and similar to PASCAL) is used to express the logic of the numerical procedures. This approach is thus different from that used in most books which either use a programming language like FORTRAN or use flow charts to express algorithms.

The solutions to selected problems have been provided at the end of the book.


Latest Print 2013 / 208 pp. / 15.3 × 22.9 cm
ISBN-978-81-203-0786-5 / ₹ 150.00

Computer Oriented Numerical and Statistical Methods

SANT SHARAN MISHRA, Reader, Department of Mathematics and Statistics at Dr. Ram Manohar Lohia Avadh University, Faizabad.

This comprehensive text provides a thorough understanding of mathematical concepts and their applications with special emphasis on computational algorithms. The book gives a detailed discussion on all the relevant topics of both numerical and statistical methods, which are nowadays very important at computing level. It also includes the basic issues related to theory of estimation and testing of hypothesis, various sampling tests, and analysis of variance with plenty of illustrations. The topics covered in this book are supported by a large number of worked-out examples, C programs and algorithms to facilitate clear understanding of various theories discussed on numerical and statistical methods.

The text is intended for the undergraduate students of computer engineering and postgraduate students of computer applications.


Latest Print 2013 / 512 pp. / 17.8 × 23.5 cm
This thoroughly revised and updated text, now in its fifth edition, continues to provide a rigorous introduction to the fundamentals of numerical methods required in scientific and technological applications, emphasizing on teaching students numerical methods and in helping them to develop problem-solving skills.

While the essential features of the previous editions such as References to MATLAB, IMSL, Numerical Recipes program libraries for implementing the numerical methods are retained, a chapter on Spline Functions has been added in this edition because of their increasing importance in applications.

This text is designed for undergraduate students of all branches of engineering.

NEW TO THIS EDITION
• Includes additional modified illustrative examples and problems in every chapter.
• Provides answers to all chapter-end exercises.
• Illustrates algorithms, computational steps or flow charts for many numerical methods.
• Contains four model question papers at the end of the text.

Primarily written as a textbook, this third edition provides a complete course on numerical methods for undergraduate students in all branches of engineering, postgraduate students in mathematics and physics, and students pursuing courses in Master of Computer Applications (MCA). Besides students, those appearing for competitive examinations, research scholars and professionals engaged in numerical computations, will treasure this edition for its in-depth analysis, systematic treatment and clarity of approach.

The third edition has been updated with new material comprising new methods and concepts and additional chapters on Boundary Value Problems and Approximation of Functions. It introduces the basics in computing, stresses on errors in computation, discusses various direct and iterative methods for solving algebraic and transcendental equations and a method for solving a system of nonlinear equations, linear system of equations, matrix inversion and computation of eigenvalues and eigenvectors of a matrix.

The book provides a detailed discussion on curve fitting, interpolation and cubic spline interpolation, numerical differentiation and integration. It also presents, various single step and predictor-corrector methods for solving ordinary differential equations, finite difference methods for solving partial differential equations with the concepts of truncation error and stability. Finally, it concludes with a treatment of numerical methods for solving boundary value problems, least squares, Chebyshev, Pade polynomial approximations and Fourier series approximation to a real continuous function.


Latest Print 2014 / 368 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3217-1 / ₹ 275.00

K. SANKARA RAO, former Professor of Mathematics, Anna University, Chennai had earlier been Senior Scientist/Engineer, Applied Mathematics Division of Vikram Sarabhai Space Centre (VSSC), Trivandrum.
**Numerical Methods with Computer Programs with C++**  
(with CD-ROM)  

PALLAB GHOSH, Assistant Professor in the Department of Chemical Engineering, IIT Guwahati.

This text, intended for undergraduate students of engineering as well as for students of Mathematics, Physics and Chemistry, shows how numerical methods can be applied in solving engineering problems using C++. The text, while emphasizing the application aspects, also provides deep insight into the development of numerical algorithms.

**KEY FEATURES**

• Gives detailed step-by-step description of numerical algorithms and demonstrates their implementation. Each method is illustrated with solved examples.
• Provides C++ programs on many numerical algorithms. Elementary problems from various branches of science and engineering are solved.
• Contains 79 programs written in C++.
• Provides about 200 solved examples which illustrate the concepts.
• The Exercise problems, with various categories like Quiz, Analytical and Numerical Problems and Software Development Projects, drill the students in self-study.
• The accompanying CD-ROM contains all the programs given in the book.

Students as well as programmers should find this text immensely useful for its numerous student-friendly features coupled with the elegant exposition of concepts and the clear emphasis on applications.


Latest Print 2009 / 648 pp. / 17.8 × 23.5 cm  

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**Probability and Queueing Theory**  

S. PALANIAMMAL, Professor and Head, Department of Science and Humanities, V.I.B. Janakiammal College of Engineering and Technology, Coimbatore.

Designed as a textbook for the B.E./B.Tech. students of Computer Science and Engineering and Information Technology, this book provides the fundamental concepts and applications of probability and queueing theory.

Beginning with a discussion on probability theory, the text analyses in detail the random variables, standard distributions, Markovian and non-Markovian queueing models with finite and infinite capacity, and queue networks. The topics are dealt with in a well-organized sequence with proper explanations along with simple mathematical formulations.

**KEY FEATURES**

• Gives concise and clear presentation of the concepts.
• Provides a large number of illustrative examples, in particular for queueing models and queueing networks, with step-by-step solutions to help students comprehend the concepts with ease.
• Includes questions asked in university examinations with their solutions for the last several years to help students in preparing for examinations.
• Provides hints and answers to unsolved problems.


Latest Print 2012 / 720 pp. / 16.0 × 24.1 cm  
ISBN-978-81-203-4244-6 / 525.00

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**SciencE AND Mathematics**  

Mathematics (Numerical Methods)  

Mathematics (Probability)
Probability and Random Processes

S. PALANIAMMAL, Professor and Head, Department of Science and Humanities, V.L.B. Janakiammal College of Engineering and Technology, Coimbatore.

Designed as a textbook for the B.E./B.Tech. students of Electronics and Communication Engineering, Computer Science and Engineering, Biomedical Engineering and Information Technology, this book provides the fundamental concepts and applications of probability and random processes.

Beginning with a discussion on probability theory, the text analyzes various types of random processes. Besides, the text discusses in detail the random variables, standard distributions, correlation and spectral densities, and linear systems. The topics are dealt with in a well-organized sequence with proper explanations along with simple mathematical formulations.

**KEY FEATURES**
- Gives concise and clear presentation of the concepts.
- Provides a large number of illustrative examples with step-by-step solutions to help students comprehend the concepts with ease.
- Includes questions asked in university examinations for the last several years to help students in preparing for examinations.
- Provides hints and answers to unsolved problems.
- Incorporates chapter-end exercises to drill the students in self-study.


*Latest Print 2013 / 716 pp. / 16.0 × 24.1 cm

Probability, Statistics and Queueing Theory

V. SUNDARAPANDIAN, Professor, Department of Mathematics, Vel Tech Dr. RR & Dr. SR Technical University, Chennai.

Probability, Statistics and Queueing Theory is considered to be a ‘tough’ subject by most engineering and science students all over the world. What Professor Sundarapandian with his indepth knowledge and rich and long experience strives to do is to make the concepts very clear and comprehensible to the students by his lucid presentation and illustrative approach.

The book analyses various types of random processes, spectral density functions and their applications to linear systems. Besides, it deals with the basics of queueing theory with a clear exposition of the five important queueing models. The text gives a detailed description of such topics as random variables, standard probability distribution, central limit theorem, random processes and spectral theory.

The text is profusely illustrated with examples and diagrams so as to make this rigorous subject more understandable to the students.

**KEY FEATURES**
- The text is comprehensive and the presentation practical.
- Over 625 worked-out Examples, and over 440 Problem Sets.
- Answers to all section-end problems.

Intended primarily as a text for undergraduate students of Engineering for their courses on Probability, Statistics, Random Processes and Queueing Theory, the book will also be extremely useful for undergraduate and postgraduate students of Science and postgraduate students of Engineering pursuing these courses.


*Latest Print 2013 / 820 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3844-9 / ₹ 475.00

PHI Learning: Publications
This revised edition provides an excellent introduction to topics in Real Analysis through an elaborate exposition of all fundamental concepts and results. The treatment is rigorous and exhaustive—both classical and modern topics are presented in a lucid manner in order to make this text appealing to students. Clear explanations, many detailed worked examples and several challenging ones included in the exercises, enable students to develop problem-solving skills and foster critical thinking. The coverage of the book is incredibly comprehensive, with due emphasis on Lebesgue theory, metric spaces, uniform convergence, Riemann–Stieltjes integral, multi-variable theory, Fourier series, improper integration, and parametric integration.

The book is suitable for a complete course in real analysis at the advanced undergraduate or postgraduate level.

**CONTENTS:**
- Preface
- Preface to the First Edition
- Real Number System
- Sequences and Series
- Real Function, Limit and Continuity
- Differentiability and Derivability
- Mean Value Theorems
- Riemann Integration
- Uniform Convergence
- Power Series
- Semi-Continuous Functions
- Parametric Integration
- Fourier Series
- Improper Integral
- Multivariable Theory
- Multiple Integral
- Double Sequence and Series
- Functions of Bounded Variation
- Riemann–Stieltjes Integral
- Metric Spaces
- Lebesgue Theory
- Bibliography
- Index.

Latest Print 2012 / 816 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4521-8 / ₹ 495.00

**Key Features**
- Step-by-step derivation of equations
- Easy demagogic approach
- Review questions to widen the analytical understanding of the students

This book is intended for the undergraduate and postgraduate students of Physics and Mathematics.

**CONTENTS:**
- Preface
- Part I: Classical Relativity—Introduction
- Classical Relativity
- Part II: Special Relativity—Electromagnetism and Special Relativity
- Relativistic Kinematics
- Relativistic Mechanics
- Special Relativity and Electromagnetism
- Minkowski’s Geometrisation of Physics
- Part III: General Relativity and Gravitation—Non-uniform Relative Motion
- Riemannian Geometry
- Einstein’s Law of Gravitation
- Static Solutions
- Stationary Solutions
- Non-static Solutions
- Relativistic Cosmology
- Appendix I
- Appendix II

Latest Print 2012 / 340 pp. / 17.8 × 23.5 cm

**K.D. Krori**, Director, Theoretical Physics Forum, Guwahati.

Relativity, apart from quantum mechanics, is the greatest wonder in science, unfolded single-handedly in the 20th century by Albert Einstein. The scientist developed special relativity as a logical sequel to general relativity. This comprehensive book presents explication of the conceptual evolution and mathematical derivations of the theories of special and general relativity. The book follows an Einsteinian approach while explaining the concepts and the theories of relativity.

Divided into 14 chapters, the book covers elementary concepts of Special relativity, as well as the advanced studies on General relativity. The recent theories like Kerr geometry, Sagnac effect, Vaidya geometry, Raychaudhuri equation and Gravitation physics vis-à-vis Quantum physics are presented in easy-to-understand language and simple style. In addition to it, the book gives an in-depth analysis on the applications of advanced theories like Vaidya-Krori-Barua solution from author’s own research works. Apart from that, the book also discusses some of the isotopic and anisotropic cosmological models, in detail.

**Key Features**
- Step-by-step derivation of equations
- Easy demagogic approach
- Review questions to widen the analytical understanding of the students
The general theory of relativity and its applications to cosmology requires very deep understanding of mathematics and physics. Keeping this in mind, this self-contained textbook is written with an eye to understand general relativity and cosmology in this book. The attempts have been made to explain mathematicians’ notions in the language of a physicist.

Primarily intended for the postgraduate students of mathematics and physics, it gives equal importance to mathematical and physical aspects, and thus sharpens understanding of the theory. The text covers many modern concepts and current developments in gravity and cosmology including Brans-Dicke theory, higher-derivative cosmology including Brans-Dicke theory, higher-derivative concepts and current developments in gravity and cosmology. The text covers many modern mathematical and physical aspects, and thus sharpens understanding of the theory. The text covers many modern concepts and current developments in gravity and cosmology including Brans-Dicke theory, higher-derivative cosmology including Brans-Dicke theory, higher-derivative concepts and current developments in gravity and cosmology. This is an attempt to give students a solid foundation in the experimental background of the theory, relativistic kinematics, relativistic dynamics, and relativistic electrodynamics. What distinguishes the text are some special features, not found in other similar texts, that give a more intuitive understanding of the subject. Another important feature of the text is its clarity and correctness with which the principles, their relations, and their applications are set forth.

This well-accepted book, now in its second edition, includes a brief account of the “properties of Cartesian tensors” and also adds “experimental verifications of the mass variation of a particle with velocity and the mass–energy equivalence relation” in Chapter 3. Besides, in Chapter 4, some calculations to show how the potentials obtained for a uniformly moving charge lead to Lorentz transformation have been added. It also includes some new problems in the exercise section of Chapters 2, 3 and 4 with their solutions given in the Appendix. The book will also be useful for competitive examinations to PG and Ph.D. courses.

KEY FEATURES
• Discusses relativistic mechanics and electrodynamics.
• Presents the covariant four-dimensional formulation of relativistic mechanics and electrodynamics.
• Explains the Lagrangian and Hamiltonian formulations in mechanics and electrodynamics.
• Discusses relativistic mechanics and electrodynamics.
• Describes the Terrell effect (visual appearance of moving objects) and the Thomas precession.
• Includes a large number of solved problems.
• Provides solutions to end-of-chapter exercises.

Matrix Methods and Vector Spaces in Physics

VINOD K. SHARMA, Department of Physics and Electronics, Keshav Mahavidyalaya, University of Delhi.

Vector spaces constitute an algebraic system satisfying certain specific properties that are vital in the development of physical theories and these are central to modern mathematics and physics. They have wide applications in a number of subjects ranging from solid state physics, solid/ fluid mechanics to relativity and electromagnetics.

This well-written book gives, in an easy-to-read style, a step-by-step and comprehensive understanding about the various concepts, theories and applications of vector spaces, matrices and tensors. The book equips the reader with the fundamental knowledge in such subjects as matrix theory, linear algebraic equations, applications of eigenvalues and eigenvectors, diagonalisation process, quadratic forms, Cartesian tensors—and more.

KEY FEATURES

• Concepts illustrated with detailed examples, theorems and proofs to make the students comprehend the topics better.

• Over 270 worked-out Examples and over 249 section-end Problems.

• A large number of Exercises, with answers to most of them.

The book is primarily intended as a textbook for undergraduate students of Physics, Applied Physics (B.Sc.) and Electronics (B.Tech.). It would also be extremely useful for the postgraduate students of Physics, Applied Physics, Electronics and Applied Mathematics (M.Sc.). In addition, the book can be profitably used by researchers working in various research laboratories.


Latest Print 2009 / 480 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3866-1 / ˚ 395.00
Medicine (Biochemistry)

Textbook of Biochemistry and Human Biology, 3rd ed.

Edited by
G.P. TALWAR, Director, Talwar Research Foundation, New Delhi. Formerly: Director, National Institute of Immunology, New Delhi; Professor and Head, Department of Biochemistry, All India Institute of Medical Sciences, New Delhi.
L.M. SRIVASTAVA, Senior Consultant and Head, Department of Biochemistry, Sir Ganga Ram Hospital, New Delhi. Formerly, Professor and Head, Department of Biochemistry, A.I.I.M.S., New Delhi.

Substantially revised and updated, this book provides a comprehensive coverage of biochemistry in the overall context of body function (and dysfunction).

Arranged in 17 sections, it begins appropriately with a section on Chemical Architecture of the Living Systems and then goes on to consider a diversity of fields with membranes and receptors, endorphins and encephalins and prostaglandins at one end of the spectrum to such topics as biochemistry of common intestinal parasites, protein-calorie malnutrition and principles of chemo-therapy at the other end.

The book is intended to be a basic text for the medical student not only during preclinical years when the subject is taught, but also during para and clinical years. Being a handbook of basic information, it will also be useful to students of human biology and biochemistry.

CONTENTS:

Latest Print 2012 / 1328 pp. (Hard Cover) / 17.8 × 23.5 cm

PHI Learning: Publications

Biostatistics for Medical, Nursing and Pharmacy Students

A. INDRAYAN, Head of the Department of Biostatistics and Medical Informatics, University College of Medical Sciences (UCMS), Delhi.
L. SATYANARAYANA, Deputy Director, Division of Epidemiology and Biostatistics, Institute of Cytology and Preventive Oncology (Indian Council of Medical Research), Noida (UP).

Designed specially for undergraduate students in medicine, pharmacy and nursing, this compact text, oriented completely to the medical aspects, skilfully analyzes the fundamentals of Biostatistics.

The book begins with discussions on Biostatistics in health and diseases, types of data, and methods of data collection. Then it goes on to give a detailed description of fertility and demography indicators, indicators of social and mental health, sampling, standard error and confidence interval, as well as the principles of statistical tests. The study concludes with a discussion on parametric and non-parametric tests, chi-square tests, regression and correlation, and sample size in medical studies.

KEY FEATURES
• Gives key terms and concepts at the beginning of each chapter.
• Provides relevant medical examples to illustrate the methods discussed.
• Has large number of exercises—numerical, MCQs and true/false—at the end of each chapter.
• Gives solutions to exercises.

Aspirants of PG entrance and USMLE examinations should also find the book extremely useful.

CONTENTS:

Latest Print 2006 / 304 pp. / 16.0 × 24.1 cm
ISBN-81-203-3054-4 / 250.00
Introduction to Biostatistics and Research Methods, 5th ed.

P.S.S. Sundar Rao, University of California at Berkeley, Dr. P.H. (Biostatistics), Columbia University, New York, is presently the Research Coordinator at the Leprosy Mission Trust India, New Delhi.

J. Richard, Australian National University, Canberra, is presently Consultant in Biostatistics and Research Methods.

The last decade has produced many textbooks on Biostatistics, with varying emphasis and degrees of mathematical complexity. This book has stood the test of time and continues to enjoy wide acceptance among students of all health and allied professions, other students and even qualified health investigators, who find it practical, simple and yet precise.

This fully updated and thoroughly revised Fifth Edition, while retaining the fundamental concepts, acquaints the reader with the advances in the subject. The book explains the concepts involved in arriving at the sample size and also a quick solution to the estimation of sample size. Survival analysis and log-rank test are illustrated with examples. The essentials of Chi square tests are simplified and presented.

Two-way analysis of variance (ANOVA) is explained with two examples, with and without interaction term. The chapters on Research Methods, Interventional Studies and Observational Studies provide step-by-step guide to plan and carry out quality research. Questions given in each chapter will help the learner to gauge the level of understanding of the principles and applications. Clues to the use of computer packages are provided whenever necessary.

Intended for undergraduate and postgraduate medical students as well as for nursing and paramedical students, the book will also be immensely useful to medical/health faculty and researchers in the field of Biostatistics.


Handbook of Neurological Examination

Navneet Kumar, Director, Professor and Head, Department of Medicine, as well as Head of Neurology Division, GSVM Medical College, Kanpur, Uttar Pradesh (UP).

Very few standard books on neurological examination are available in the market today that give a comprehensive analysis of the subject. Here, for the first time, a well-known neurologist, Dr. Navneet Kumar, with his expertise and his many years of experience in teaching and treating numerous patients afflicted with various neurological disorders, tells the medical students as well as practising physicians or neurologists how to conduct neurological examination of the patient in a scientific and systematic manner. He shows with great skill, how the examination of first impression and gait, history taking, and examination of higher mental functions including speech are to be conducted.

The text focuses on, among others, the examination of all the cranial nerves (First to Twelfth), the motor system, movement disorders, the sensory system, the autonomic nervous system, and bladder dysfunction, with equal deftness. Finally, this handbook provides different approaches to examine the unconscious patient, and special neurological situations, the methods of neurological investigation, as well as the methods of case sheet writing.

This book is intended primarily as a practical handbook for the students of MBBS, MD (Medicine), DNB (Medicine), Paediatrics and Psychiatry. The book would also be of great value to the students of DM (Neurology) and M.Ch. (Neurosurgery) as well as practising physicians and neurologists.

Neurology, a subject considered to be complex, studies the nervous system, and the disorders and diseases associated with it. Most medical students find it a 'tough' subject. Though quite a few books are available in the market on the subject, somehow they fail to explain the topics in an accessible style to the students. What this comprehensive and reader-friendly book strives to do is to demystify the subject and make it comprehensible even to the average reader.

The book encompasses, within the covers of a single volume, all aspects of neurology with great skill and dexterity. It gives an in-depth treatment of such topics as disorders of consciousness, language and speech disorders, sleep disorders, movement disorders, vertigo and ataxia. Dr. Navneet Kumar, with his expertise and long years of experience, gives a masterly analysis of many other topics such as headaches including migraine, backaches, meningitis and strokes—in both the young and the elderly. He devotes four chapters exclusively to Epilepsy, a disease dreaded by many, with lots of superstitions attached to it. What's more, he discusses in detail about a host of other topics in neurology, for example, the early diagnosis of dementia, Alzheimer’s disease, and neurological and psychiatric disorders.

This book is intended primarily as a text for students of MD and DNB Medicine as well as for students of Paediatrics. Besides, students of MBBS, DM (Neurology) and M.Ch. (Neurosurgery) as also practising physicians, who wish to have a deeper knowledge of the subject will find the book quite useful.

**KEY FEATURES**

- Describes modern investigative techniques in the diagnosis of nervous system disorders; these include EEG, CAT scan, MRI, PET scan, and EMG.
- Provides photographs, and a large number of diagrams and tables to illustrate the concepts discussed.
- Acquaints the readers with the latest methods of neurological therapy, such as gene therapy and stem cell therapy.

**CONTENTS**

- Foreword
- Preface
- Acknowledgements

Latest Print 2011 / 776 pp. / 17.8 × 23.5 cm

ISBN-978-81-203-4243-9 / 625.00
Psychology is both an applied and academic field that studies the human mind and behaviour. Research in psychology seeks to understand and explain how we think, act and feel. This book comprehensively deals with all aspects of Psychology (academic and applied) to help the students of Nursing and other health paradigms gain a complete insight of the human mind.

The book begins with the evolution and history of Psychology, and its branches and moves on to the methods adopted by the contemporary psychologists in mapping the human brain. The book focuses on the applications of psychology in treating mental health patients, in performance enhancement, and self-help. Psychological aspects of human mind and behaviour, like perception, learning, emotion, aptitude and intelligence are further exemplified and elucidated with the Clinical Problems associated with them.

The book also deals with the most important problem faced by the humans in the present era, i.e. Stress. It gives answers to the questions like what are the problems associated with the Stress and how one can cope with those problems. The modern day issues like lifestyle illness and attitudinal problems are also addressed in this book, elaborately.


Latest Print 2013 / 256 pp. / 17.8 × 23.5 cm  
ISBN-978-81-203-4783-0 / 225.00
Classical Mechanics

G. ARULDHAS, former Professor and Head of Physics Department, and former Dean of Faculty of Science, University of Kerala.

This book offers an in-depth presentation of the mechanics of particles and systems. The material is thoroughly class-tested and hence eminently suitable as a textbook for a one-semester course in Classical Mechanics for postgraduate students of physics and mathematics. Besides, the book can serve as a useful reference for engineering students at the postgraduate level.

The book provides not only a complete treatment of classical theoretical physics, but also an enormous number of worked examples and problems to show students clearly how to apply abstract principles and mathematical techniques to realistic problems. While abstraction of theory is minimized, detailed mathematical analysis is provided wherever necessary.

Besides an all-embracing coverage of different aspects of classical mechanics, the rapidly growing areas of nonlinear dynamics and chaos are also included. The chapter on Central Force Motion includes topics like satellite parameters, orbital transfers and scattering problem. An extensive treatment of the essentials of small oscillations, which is crucial for the study of molecular vibrations, is included. Rigid body motion and special theory of relativity are also covered in two separate chapters.

CONTENTS:

Classical Mechanics, Rev. ed.

C.R. MONDAL, Lecturer, Department of Mathematics, North-Eastern Hill University, Shillong.

Intended for postgraduate students of mathematics, the revised edition of this compact textbook helps readers acquire a thorough understanding of the basic concepts of classical mechanics.

The text is organized into five chapters. After a comprehensive introduction to the terminologies of dynamical systems and generalized coordinates, Lagrange’s equations of motion for holonomic systems, and conservative and non-holonomic systems are developed. The text then gives a detailed coverage of the Euler–Lagrange equation, equations of motion of rigid bodies, and Hamilton’s equations of motion, suitably reinforced with examples to enhance learning. Finally, canonical transformations and Hamilton’s equations of motion in Poisson’s bracket are discussed along with the Hamilton–Jacobi theory and the Hamilton–Jacobi equation for Hamilton’s principal function.

Numerous worked-out examples included throughout the text and end-of-chapter exercises will be of considerable help to the students in comprehending the application of the principles to physical problems.

This comprehensive and well-organized text explains the principles of mechanics in as simple language as possible.

The text starts with Newton’s laws of motion, units and dimension and dynamics of a system of particles, and rotating frame of reference. Then kinematics of a rigid body motion and Eulerian angles are discussed, together with the dynamics of a rigid body in space and orbital motion. The text then goes on to describe Lagrange and Hamilton methods and the special theory of relativity. New topics such as rocket dynamics along with vehicle optimization and three-body and n-body problems are also presented.

Typical solved examples and exercises are included in each chapter. Multiple-choice questions given at the end of the text are taken from examination papers of various Indian universities, GATE and other competitive examinations.

The book is intended for postgraduate students of mathematics, physics, and engineering, particularly in aerospace, civil and mechanical engineering.

CONTENTS:

Latest Print 2011 / 416 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-2676-7 / ` 250.00

R.N. TIWARI, former Professor of Mathematics at Government College of Science, Pt. Ravishankar Shukla University, Raipur (Chhattisgarh).

B.S. THAKUR, Lecturer, School of Studies in Mathematics, Pt. Ravishankar Shukla University, Raipur.

Intended as a text for postgraduate students of mathematics, this compact and well-organized book offers insights into the principles of classical mechanics and, in particular, deals with the problems of dynamical systems.

Divided into seven chapters, the text begins with a discussion on some elementary results of statics and dynamics. It then goes on to analyze at length the Hamiltonian formulation along with the Poisson bracket, the variational principle (taking Euler’s equation of calculus of variation as the base), and different forms of the variational principle. Finally, the text explains the integral invariants, canonical transformations, and the Hamilton–Jacobi theory.

KEY FEATURES
• A fairly large number of worked-out examples are interspersed throughout the text to illustrate the application of the concepts to the problems discussed.
• Miscellaneous Exercises are given at the end of the book to drill the students in self-study.
• The text entirely covers UGC model curriculum for M.Sc. (Mathematics).

CONTENTS:

Latest Print 2009 / 188 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3126-6 / ` 150.00
Electricity and Magnetism

NAVIN WADHWANI, Reader, Department of Physics, University of Lucknow, Lucknow.

Designed primarily as a textbook for the undergraduate students of Physics, this well-organized text covers all the major topics on Electricity and Magnetism and tries to provide a clear understanding of the fundamentals of the subject.

The book begins with a discussion on vector calculus and explains the concepts of divergence and curl as they are applied to electricity and magnetism. Then it goes on to describe Coulomb’s law of electrostatic forces, Gauss’ theorem for electrostatics, and methods of images. The text also explains the electrical properties of matter, magnetic field, Maxwell’s equations and their relevance to the electromagnetic character of light, and magnetic properties of matter. Finally, it shows the role of relativity in electricity and magnetism so that students can appreciate the relevance of relativity in understanding electromagnetic phenomena.

KEY FEATURES

• Calculations have been worked out to the last step.
• Provides many solved and a large number of unsolved problems to demonstrate how theory is applied in practice.

CONTENTS:


Latest Print 2010 / 200 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-3965-1 / ₹ 150.00

PHI Learning: Publications

Electromagnetism Volume I (Theory)

A. PRAMANIK has been D.J. Gandhi Distinguished Visiting Professor in the Department of Electrical Engineering at IIT Bombay. Currently he is Professor Emeritus in the Department of Electrical Engineering at the College of Engineering, Pune.

This book [earlier titled as Electromagnetism: Theory and Applications which is bifurcated into two volumes: Electromagnetism: Theory and Electromagnetism: Applications (Magnetic Diffusion and Electromagnetic Waves) has been updated to cover some additional aspects of theory and nearly all modern applications. The semi-historical approach is unchanged, but further historical comments have been introduced at various places in the book to give a better insight into the development of the subject as well as to make the study more interesting and palatable to the students.

Appendices contain in-depth analysis of self-inductance and non-conservative fields (Appendix 6), proof regarding the boundary conditions (Appendix 8), theory of bicylindrical co-ordinate system to provide the physical basis of the circuit approach to the cylindrical transmission line systems (Appendix 10), and properties of useful functions like Bessel and Legendre functions (Appendix 9).

The book is designed to serve as a core text for students of electrical engineering. Besides, it will be useful to postgraduate physics students as well as research engineers and design and development engineers in industries.

CONTENTS:


Latest Print 2014 / 696 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4888-2 / ₹ 525.00
A. PRAMANIK has been D.J. Gandhi Distinguished Visiting Professor in the Department of Electrical Engineering at IIT Bombay. Currently he is Professor Emeritus in the Department of Electrical Engineering at the College of Engineering, Pune.

This book is a sequel to Electromagnetism: Theory (Volume I). It has been updated to cover some additional aspects of theory and nearly all modern applications. The semi-historical approach is unchanged, but further historical comments have been introduced at various places in the book to give a better insight into the development of the subject as well as to make the study more interesting and palatable to the students.

KEY FEATURES
• Emphasis on practical aspects of wave guidance and radiation
• Sections on analysis of cylindrical dielectric waveguide (e.g. of optical fibres) in Chapters 18 and 22
• Tensor formulation of Maxwell’s Stresses
• Extension of Principle of Duality to time varying field problems as well as to non electrical systems
• Extrapolation of the method of images from partially embedded conduction current elements to discontinuous current elements with displacement currents in antennae problems
• Explanation of the physical basis of the mechanism of electromagnetic radiation
• Analysis of wave polarization including complete and partial polarization
• Effects of finite geometrical dimensions of the conducting media on the skin-effect phenomenon
• Types of apertures in receiving antennae

The book is designed to serve as a core text for students of electrical engineering. Besides, it will be useful to postgraduate physics students as well as research engineers and design and development engineers in industries.


Latest Print 2014 / 580 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4901-8 / 525.00
**SCIENCES AND MATHEMATICS**

**Physics (Electromagnetism)**

**Fundamentals of Electricity and Magnetism**

S.K. Chatterjee, former Professor in Physics, National Institute of Technology, Durgapur and UGC Emeritus Fellow. A life member of Indian Institute of Metals and Materials Research Society of India.

Primarily intended as a textbook for undergraduate students of Physics, this book provides a comprehensive coverage of electricity and magnetism.

Organised in 12 chapters, the text is developed based on the vast experience of the author. The book begins with mathematical preliminaries that deal with vector algebra. The text encompasses a wide range of topics, such as electrostatics, current electricity, magnetism and magnetic effect of current. It gives a thorough treatment of electromagnetic induction, varying current, alternating current and their applications. The book lucidly explains heating effect of current, thermoelectricity, theory of magnetism, semiconductors and superconductivity. The topics such as Maxwell’s equations, electromagnetic waves, plasma state of matter, discharge of electricity through gases and magnetohydrodynamics are also elaborately dealt with. The book features a lot of worked-out problems in chapters as well as chapter-end review exercises which will enable students to get a more in-depth understanding of key concepts.


Latest Print 2014 / 272 pp. / 16.0 x 24.1 cm

**Applied Physics for Engineers**

S.K. Chatterje, former Professor in Physics, National Institute of Technology, Durgapur and UGC Emeritus Fellow. A life member of Indian Institute of Metals and Materials Research Society of India.

Primarily intended as a textbook for undergraduate students of Physics, this book provides a comprehensive coverage of electricity and magnetism.

Organised in 12 chapters, the text is developed based on the vast experience of the author. The book begins with mathematical preliminaries that deal with vector algebra. The text encompasses a wide range of topics, such as electrostatics, current electricity, magnetism and magnetic effect of current. It gives a thorough treatment of electromagnetic induction, varying current, alternating current and their applications. The book lucidly explains heating effect of current, thermoelectricity, theory of magnetism, semiconductors and superconductivity. The topics such as Maxwell’s equations, electromagnetic waves, plasma state of matter, discharge of electricity through gases and magnetohydrodynamics are also elaborately dealt with. The book features a lot of worked-out problems in chapters as well as chapter-end review exercises which will enable students to get a more in-depth understanding of key concepts.


Latest Print 2014 / 272 pp. / 16.0 x 24.1 cm

**MATHEMATICS**

**Physics (Engineering Physics)**

**Applied Physics for Engineers**

Neeraj Mehta, Assistant Professor at Banaras Hindu University, Varanasi.

This book is intended as a textbook for the first-year undergraduate engineering students of all disciplines. The text, written in a student-friendly manner, covers a wide range of topics of engineering interest both from the domains of applied and modern physics. It is meticulously tailored to cover the syllabi needs of almost all the Indian universities and institutes. With its exhaustive treatment of different topics in one volume, it relieves the engineering students of the arduous task of referring to several books. Besides engineering students, this book will be equally useful to the BSc (Physics) students of different universities.

**KEY FEATURES**

- Simple and clear diagrams throughout the book help students in understanding the concepts clearly.
- Numerous in-chapter solved problems, chapter-end unsolved problems (with answers) and review questions assist students in assimilating the theory comprehensively.
- A large number of objective type questions at the end of each chapter help students in testing their knowledge of the theory.


Latest Print 2014 / 1020 pp. / 17.8 x 23.5 cm
**Physics for Engineers**

N.K. VERMA, Senior Professor of Physics, School of Physics and Materials Science, Thapar University, Patiala. He has also been Registrar, Dean of Students Affairs, and Head of School of Physics and Materials Science in Thapar University.

*Physics for Engineers* is designed to serve as a text for the first course in physics for engineering students of most of the technical universities in India. It can also be used as an introductory text for science graduates.

This book provides a clear, precise and accessible coverage of fundamentals of physics through succinct presentation, logical organization, and sound pedagogical order. Extensive care has been taken to apprise the students regarding the applied aspects of the concepts in physics. Most of the complex ideas are supported by explanatory figures to make the underlying concepts easy to understand and grasp. The text has some 275 such illustrations to reflect the concepts and aid the explanations. The wide range of topics this book covers, make it an excellent textbook for students as each chapter is relatively self-contained, and most of the chapters have practical utility.

Inside, you will find the chapter-end exercises, which remind you all the important facts you need to remember fast!

If you want thorough understanding of the subject as well as edge on your peers, this is the book you need to follow.

The Solution Manual is also available for course instructors.

**KEY FEATURES**

- Well-planned ‘Short Answer Questions’ and ‘Multiple Choice Questions’—To brush up the chapter fast, quickly and effectively especially before tests.
- Well-structured ‘Solved Problems’—To illustrate the basic concepts.
- Ample ‘Unsolved Problems’ (with answers supplied)—To practice and confidence building.

**CONTENTS:**


Latest Print 2013 / 596 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4849-3 / INR 495.00

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**Measurement, Instrumentation and Experiment Design in Physics and Engineering**

MICHAEL SAYER, Professor (emerity) of Physics, Queen’s University at Kingston, Ontario, Canada.

ABHAI MANSINGH, Professor of Physics, and Director, South Campus, University of Delhi.

This book is designed to be used at the advanced undergraduate and beginning graduate level in physics, applied physics and engineering physics. The text explains, in a systematic and logical manner, the principles of experimental physics and physics related engineering to show how measurement, experiment design, signal processing and modern instrumentation can be used most effectively. Emphasis is laid on how to review techniques in important areas of application so that the reader develops his own insights and knowledge to work with any instrument and its manual. Questions are provided throughout to assist the reader towards this end. Laboratory practices in temperature measurement, optical techniques, electrical measurements and nuclear instrumentation have been covered in detail.

**CONTENTS:**


Latest Print 2010 / 380 pp. / 16.0 × 24.1 cm
Essentials of Physics, Vol. I

S.M. WAGH, Director, Central India Research Institute, Nagpur.
D.A. DESHPANDE, Director, PCD Institute of Computer Studies and Research, Nagpur.

Physics is our attempt to conceptually grasp all the happenings around us. Then, realizing that concepts are the free creations of the human mind helps us develop proper understanding of a subject, especially during formative stages.

This introductory book on Physics presents careful analysis of the developments of basic concepts for the beginners. It is written in a way that stimulates students and creates a sustained interest in Physics so that studying the subject is enjoyable and satisfying. The physical concepts are explained clearly enough for anyone to understand. In this text, the exercises are provided in three different categories, namely, as questions, as problems, and as multiple choice questions. The first category of exercises contains thought provoking and descriptive questions. The second category of exercises involves numerical computations. The third category of exercises, of multiple choice questions, provides a reader with a flavour of the currently popular mode of examination.

Intended for the introductory-level college physics courses, the book will also be an invaluable resource for the students preparing for various competitive examinations.

KEY FEATURES
• Readers can modify the given situation to design questions and problems. This helps inculcate research aptitude.
• Solved examples provide quantitative as well as qualitative features of physical situations encountered in the real life.
• Readers are able to visualize the applicability of the laws of physics.


Latest Print 2012 / 600 pp. / 21.6 x 27.8 cm
ISBN-978-81-203-4642-0 / ₹ 395.00

PHI Learning: Publications
This book, in its simple and straightforward treatment of the subject, discusses the essentials of Modern Physics. It is designed as a text for the course on Modern Physics for undergraduate students in Physics and other disciplines in science. The text begins with introductory topics such as Atom Models, Wave Mechanical Concepts, Quantum Mechanic and moves on to rather advanced and contemporary topics such as LASERS, Fiber Optics, Holography, and Nuclear and Particle Physics.

Concepts are supplemented by many worked-out examples, review questions, and problems. Simple mathematical techniques have been used to elucidate the underlying principles to make the book explanatory, exhaustive, and user-friendly.

CONTENTS:
Experimental spectroscopic techniques, especially those involving lasers, have wide-ranging applications in the fields of physics, medicine, electronics, and chemistry. Keeping in mind the importance of spectroscopic detection and characterization of atomic and molecular species, this book, now in its Second Edition, is updated. It deals with both the conventional and modern experimental techniques related to atoms, spectroscopy and lasers. It discusses the recent innovations, types and operating principles of lasers and laser systems. A section on Fiber Laser has been added in the new edition of the book. Recent developments in planetary detection of atoms and molecules by Laser Induced Breakdown Spectroscopy (LIBS) has prompted the inclusion of a section on LIBS on planet Mars along with its applications. Primarily intended as a text for undergraduate and postgraduate students of Physics in various Indian universities, this up-to-date book would be immensely useful also for both undergraduate and postgraduate students in Chemistry, Astrophysics, Metallurgy and Material Science, and Geology and Mining.

**KEY FEATURES**

- Coverage is quite extensive to cater to students of most Indian universities—with detailed discussions on atoms, spectroscopy and lasers.
- Gives special emphasis on modern aspects of spectroscopy such as laser cooling of atoms.
- Contains more than 140 diagrams to illustrate the concepts better.

**CONTENTS:**

- Preface.
- Quantization of Electromagnetic Radiation.
- Line Spectra of Atoms and the Old Quantum Theory.
- Physics of Lasers and Laser Systems.
- Modern Physics for Scientists and Engineers.
- Modern Physics for Scientists and Engineers.
SCIENCE AND MATHEMATICS

Physics (Molecular Spectroscopy)

G. ARULDHAS, Formerly Professor and Head of Physics Department, and Dean Faculty of Science, University of Kerala.

Designed to serve as a textbook for postgraduate students of physics and chemistry, this second edition improves the clarity of treatment, extends the range of topics, and includes more worked examples with a view to providing all the material needed for a course in molecular spectroscopy—from first principles to the very useful spectral data that comprise figures, charts and tables.

To improve the conceptual appreciation and to help students develop more positive and realistic impressions of spectroscopy, there are two new chapters—one on the spectra of atoms and the other on laser spectroscopy. The chapter on the spectra of atoms is a detailed account of the basic principles involved in molecular spectroscopy. The chapter on laser spectroscopy covers some new experimental techniques for the investigation of the structure of atoms and molecules. Additional sections on interstellar molecules, inversion vibration of ammonia molecule, fibre-coupled Raman spectrometer, Raman microscope, supersonic beams and jet-cooling have also been included.

Besides worked-out examples, an abundance of review questions, and end-of-chapter problems with answers are included to aid students in testing their knowledge of the material contained in each chapter.

Solutions manual containing the complete worked-out solutions to chapter-end problems is available for instructors.


Latest Print 2014 / 444 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-3215-7 / ₹ 350.00

Fundamentals of Optics

DEVRAJ SINGH is Lecturer in the Department of Applied Physics at Amity School of Engineering and Technology, New Delhi.

Intended as a textbook for undergraduate students of physics, this book provides a sound understanding of the fundamental concepts of optics.

The book covers a wide range of interesting topics such as Fermat’s principle, geometrical and fibre optics, dispersion, interference, diffraction and polarization of light waves, optical instruments, lens aberrations and holography. It also discusses principles, types and components of lasers, electromagnetic waves, photo-conductivity and photovoltaics. The topics are dealt with in a well-organized sequence with proper explanations along with simple mathematical formulations.

KEY FEATURES
• Explains the concepts through extensive use of line drawings.
• Gives derivations of essential relations in full.
• Provides several solved illustrative examples to help students comprehend the concepts with ease.
• Includes multiple choice questions and theoretical questions to help students check their understanding of the subject matter.
• Contains numerical problems with answers to build problem-solving skills.


Latest Print 2010 / 448 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4189-0 / ₹ 350.00
This book presents a discussion on various types of laser systems, explains their structures and working principles, and throws light on their recent applications especially in science, medicine, industry, defence and environmental studies.

The text describes the special features of laser beams such as directionality, intensity, monochromaticity and coherence in detail and gives an overview of laser technology so as to answer the question—why should every engineer study lasers? Knowledge of quantum mechanics is essential for understanding the principles of laser technology. The book provides an overview of quantum mechanics in a step-by-step manner. It also describes the pumping process used in lasers, laser rate equations as well as light amplification and oscillation in detail. The book addresses how laser output is controlled using methods such as Q-switching, cavity dumping and mode-locking.

The inclusion of a large number of solved examples and review questions further strengthens the text. An attempt has been made to keep the presentation and explanation as simple as possible.

The book is designed for the undergraduate engineering students of all disciplines. Some universities include the study of Laser Systems as a structured course in their curriculum.

CONTENTS:

Latest Print 2011 / 224 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4391-7 / ` 225.00

Laser Systems and Applications

NITYANAND CHOUDHARY, Associate Professor and Head, Department of Physics, JSS Academy of Technical Education, Noida, UP.
RICH VERMA, Assistant Professor, Department of Physics, JSS Academy of Technical Education, Noida, UP.

This book presents a discussion on various types of laser systems, explains their structures and working principles, and throws light on their recent applications especially in science, medicine, industry, defence and environmental studies.

The text describes the special features of laser beams such as directionality, intensity, monochromaticity and coherence in detail and gives an overview of laser technology so as to answer the question—why should every engineer study lasers? Knowledge of quantum mechanics is essential for understanding the principles of laser technology. The book provides an overview of quantum mechanics in a step-by-step manner. It also describes the pumping process used in lasers, laser rate equations as well as light amplification and oscillation in detail. The book addresses how laser output is controlled using methods such as Q-switching, cavity dumping and mode-locking.

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The book is designed for the undergraduate engineering students of all disciplines. Some universities include the study of Laser Systems as a structured course in their curriculum.

Oscillations and Waves

SURESH GARG, Professor of Physics at School of Sciences, Indira Gandhi National Open University (IGNOU), New Delhi. Currently he is Commonwealth Expert and Founder Director of the recently created Centre for Learning and Teaching, National University of Lesotho, Roma, Southern Africa.

C.K. GHOSH, Head, Student Services Centre, IGNOU, New Delhi. He is also the Nodal Officer of the Integrated M.Sc–Ph.D Programme in Physics and Astrophysics under IGNOU–Indian Institute of Astrophysics Collaboration and the Chairman, Content Advisory Group of Physics, SAKSHAT Education portal of Ministry of Human Resource Development (MHRD), Government of India.

SANJAY GUPTA, Senior Lecturer in Physics at School of Sciences, IGNOU.

Primarily intended for the undergraduate students of physics, this book presents a systematic exposition of the fundamentals of physics of oscillations and waves. The treatment of the subject is rigorous, interactive and student-friendly. The involved mathematical steps have been worked out and alternative approaches have been discussed, wherever possible, to equip students with ‘extra’ skills.

Organized in two parts—Part I (Oscillations) and Part II (Waves)—the book is structured in such a way that the students participate actively as they proceed and get ample opportunities to develop problem solving skills. More than one hundred problems—numerical and reason based questions—with graded difficulty levels have been included as Practice Exercises and Review Exercises in each chapter. Moreover, Solved Examples have been interspersed in the text to facilitate clear understanding of the concepts involved in each section.


Latest Print 2009 / 332 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-3921-7 / ₹ 195.00

Introduction to Nuclear and Particle Physics, 3rd ed.

V.K. MITTAL, Professor of Physics at Punjabi University, Patiala.

R.C. VERMA, Professor and former Head of Physics Department at Punjabi University, Patiala.

S.C. GUPTA, has been Professor and Head, Department of Physics, Punjabi University, Patiala.

This thoroughly revised book, now in its third edition, continues to provide a comprehensive introduction to this increasingly important area of nuclear and particle physics. It combines coverage of basic concepts, principles and applications, along with the latest developments.

Beginning with the historical developments of the subject, properties and constituents of the nucleus, quantitative facts about nucleus, etc., the book moves on to give insights into nuclear models, phenomenon of radioactivity and its applications in various fields, nuclear reactions including reactions in sun and stars, photoelectric and Compton effects, pair production, particle accelerators and types of radiation detectors. The text also presents an extensive discussion on elementary particles and their fundamental reactions, fundamental forces, conservation laws and the quark model. Besides updating and revising the existing text, the new edition amplifies several sections across the book for easy understanding of the topics discussed.

The text is designed for the students of B.Sc. (Physics), though it can also serve as introductory review material for M.Sc. (Physics) students.

KEY FEATURES
- Contains actual experimental data.
- Includes a large number of solved problems to help students comprehend the concepts with ease.
- Provides answers to unsolved problems.
- Gives review questions to test the student’s comprehension of the subject.


Latest Print 2014 / 416 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4738-0 / ₹ 425.00
In Science, experiments are as important as theory and, in subjects like Physics and Chemistry, experiments form a significant part. This compact book on Practical Physics gives all the experiments required by undergraduate students of Physics. They are chosen as per the latest university syllabi. Divided into six chapters, the book contains a large number of experiments from general Physics, properties of matter, mechanics, heat, sound, optics, magnetism and electricity. The experiments are discussed in relation to the principles involved, the apparatus used, procedures required as well as observation and result. Tables and graphs are given wherever necessary. Undergraduate students of Physics should find this book extremely useful as an adjunct text for their study.

CONTENTS:

Latest Print 2011 / 340 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4434-1 / `295.00

Practical Physics

P.R. SASI KUMAR, Department of Physics, Maharaja's College, Ernakulam (Cochin), Kerala.

In Science, experiments are as important as theory and, in subjects like Physics and Chemistry, experiments form a significant part. This compact book on Practical Physics gives all the experiments required by undergraduate students of Physics. They are chosen as per the latest university syllabi. Divided into six chapters, the book contains a large number of experiments from general Physics, properties of matter, mechanics, heat, sound, optics, magnetism and electricity. The experiments are discussed in relation to the principles involved, the apparatus used, procedures required as well as observation and result. Tables and graphs are given wherever necessary. Undergraduate students of Physics should find this book extremely useful as an adjunct text for their study.

CONTENTS:

Latest Print 2011 / 340 pp. / 17.8 × 23.5 cm
ISBN-978-81-203-4434-1 / `295.00
## Principles of Non-relativistic and Relativistic Quantum Mechanics

**K.D. KRORI**, Director, Theoretical Physics Foundations, Guwahati and Member, Physics Academy of the North East, Guwahati.

Quantum mechanics emerged as one of the greatest discoveries in science owing to pioneering work and individual contributions of eminent scientists-Planck, Einstein, Bohr, Compton, de Broglie, Schrodinger, Heisenberg, and Dirac over a span of three decades from 1900 to 1930. Later, path integral formalism and quantum electrodynamics came through the work of Feynman. Still later, Weinberg and Salam developed the electroweak theory. The entire spectrum of both non-relativistic quantum mechanics and relativistic quantum mechanics has been covered in this book in a simple style to be truly beneficial to all levels of students.

The book is organized into three parts. The first part describes the development of quantum theory, starting from Planck's law to de Broglie hypothesis. The Schrödinger theory has been introduced with relevant logic. This part also includes the treatments of angular momentum, path integral formalism, two-electron systems and interaction of radiation with matter.

The second part deals with relativistic quantum theory including Klein-Gordon and Dirac equations, Weyl's neutrino theory, ending with gauge theory applied to Salam-Weinberg electroweak theory. The third part delves into the conceptual foundations of quantum mechanics, and Einstein-Bohr debate culminating in Bell's inequality theorem. The book concludes with a discussion on three quantum interference effects in electromagnetic and gravitational fields each of which has a deep physical importance.

Throughout, the book is suitably illustrated to clarify the concepts and contains worked-out problems as well as chapter-end exercises.

This book is intended for undergraduate and postgraduate students of physics and chemistry.

### CONTENTS:

- Preface
- Non-relativistic Quantum Theory
- Relativistic Quantum Theory
- Quantum Interference Phenomena
- Appendix
- Index

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## Photonics: An Introduction

**P.R. SASI KUMAR** is with the Department of Physics, Maharaja's College, Ernakulam (Cochin), Kerala.

Photonics is a multidisciplinary subject that combines electronics and optical technologies. Primarily intended for the undergraduate students of Physics, this book explains the fundamental aspects of Photonics, in detail.

Starting from the basics, the book elaborately discusses the advanced topics, specifically highlighting the research studies done in the field. The concepts are theoretically explained and mathematically treated to help the students in understanding the concepts skillfully. The book explains the phenomena like the particle properties of light, the potential of creating signal processing device technologies using photons, the practical application of optics, and an analogy to electronics.

The topics on radiometry, optical processes in semiconductors, light emitting diodes, photodetectors, and solar cells; fibre optics; modulation; holography; lasers; non-linear optics; integrated optics; and display devices are also dealt with in detail. The topics are well-supported with the neatly labelled figures and illustrations. The solved examples, included in every chapter, give an analytical insight to the subject.

### CONTENTS:

- Preface
- Radiometry
- Elements of Optical Phenomena in Semiconductors
- Light Emitting Diode
- Semiconductor Lasers
- Photodetectors
- Solar Cells
- Fibre Optics
- Modulation of Light
- Non Linear Optical Processes
- Integrated Optics
- Holography
- Display Devices
- Laser Advances in Photonics

Latest Print 2012 / 224 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-4532-4 / ₹ 225.00
Quantum Mechanics

R.K. SRIVASTAVA, formerly Professor of Ranchi University.

Quantum Mechanics has wide applications in experimental physics and theoretical physics, and this book aims at presenting the fundamentals of quantum mechanics in a clear and concise manner.

Primarily intended as a textbook for the postgraduate students of physics, it provides a discussion of the physical concepts to introduce the readers to quantum mechanics. The text begins with the formulation of Schrödinger wave mechanics. Then it moves on to give insights into Heisenberg matrix formulation, Dirac notations, Pauli theory of spin and semi-classical theory of radiation. It concludes with the relativistic theory of a single particle and elements of second quantisation including the interaction of radiation with matter.

KEY FEATURES
• Comprehensive and lucid discussion on the fundamentals of quantum mechanics.
• Chapter-end exercises enable to test the conceptual understanding and analytical skills of the students.


Quantum Mechanics

B.K. AGARWAL, Formerly Professor and Head, Department of Physics, and Dean, Faculty of Science, University of Allahabad.

HARI PRAKASH, Professor of Physics, University of Allahabad.

This well-organized and comprehensive text gives an in-depth study of the fundamental principles of Quantum Mechanics in one single volume. Appropriate for the postgraduate courses, the book deals with both relativistic and non-relativistic quantum mechanics.

The distinguishing features of the text are its logical and systematic coverage of the fundamental principles and the applications of the theory, besides presentation of examples from the areas of atomic and molecular physics, solid state physics and nuclear physics.

The mathematical treatment is rigorous and thorough and the text is supplemented with numerous problems, with hints provided for the difficult ones. These features make the text handy for self-study as well as for teaching.


Latest Print 2012 / 568 pp. / 17.8 × 23.5 cm ISBN-978-81-203-1007-0 / 295.00
Quantum Mechanics, 2nd ed.

G. ARULDHAS, was Professor and Head of Physics Department, and Dean, Faculty of Science, University of Kerala.

The Second Edition of this concise and compact text offers students a thorough understanding of the basic principles of quantum mechanics and their applications to various physical and chemical problems. This thoroughly class-texted material aims to bridge the gap between the books which give highly theoretical treatments and the ones which present only the descriptive accounts of quantum mechanics. Every effort has been made to make the book explanatory, exhaustive and student friendly. The text focuses its attention on problem-solving to accelerate the student’s grasp of the basic concepts and their applications.

WHAT’S NEW TO THIS EDITION?
• Includes new chapters on Field Quantization and Chemical Bonding.
• Provides new sections on Rayleigh Scattering and Raman Scattering.
• Offers additional worked examples and problems illustrating the various concepts involved.

This textbook is designed as a textbook for postgraduate and advanced undergraduate courses in physics and chemistry.

Solutions Manual containing the solutions to chapter-end exercises is available for instructors.


Latest Print 2013 / 520 pp. / 16.0 × 24.1 cm

Quantum Mechanics: 500 Problems with Solutions

G. ARULDHAS, was Professor and Head of Physics Department, and Dean, Faculty of Science, University of Kerala.

Quantum mechanics is an important area of physics and students often find it ‘tough’ from the understanding point of view. By providing 500 problems with their solutions, Professor Aruldhas, with his expertise in and long experience of teaching the subject, makes the students comprehend the fundamental concepts of Quantum Mechanics with ease.

This problem book provides a thorough understanding of the subject and its applications to various physical and chemical problems. The text includes typical problems that illustrate the concepts. It is self-explanatory, comprehensive, and user-friendly.

KEY FEATURES
• Gives, in the beginning of each chapter, an outline of the theory required for solving problems.
• Includes problems from the simple plug-ins to increasing order of difficulty to strengthen the student’s understanding of the subject.
• Provides many mathematical steps to make the book user-friendly.
• Gives solutions of problems with different types of potentials including the Dirac delta function potential.

Both undergraduate and postgraduate students of physics and chemistry as well as those preparing for the Joint CSIR-UGC test for JRF and other competitive examinations should find this book extremely practical and valuable.


Latest Print 2013 / 376 pp. / 17.8 × 23.5 cm

Latest Print 2013 / 520 pp. / 16.0 × 24.1 cm

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PHI Learning: Publications
Quantum Mechanics in Physics and Chemistry with Applications to Biology

RABI MAJUMDAR, Emeritus Professor in the Department of Natural Sciences, West Bengal University of Technology, Kolkata.

This book provides a comprehensive treatment of the principles and applications of quantum mechanics with equal emphasis on concept building and problem solving. The book follows an integrated approach to expose the students to applications of quantum mechanics in both physics and chemistry streams. A chapter is devoted to biological applications as well, to evoke the interest of the students pursuing courses in Biotechnology and Bioinformatics. Such unique organization of the book makes it suitable for both Quantum Mechanics and Quantum Chemistry courses, where the common areas like molecular structure and spectroscopy are emphasized.

The book can serve as an ideal textbook for the first-year postgraduate students of both physics and chemistry as well as for senior undergraduate students pursuing honours courses in these disciplines.

The book helps students learn difficult concepts of quantum mechanics with simpler mathematics and intuitive language, but without sacrificing rigour. It has informal classroom type approach suitable for self-learning.


Latest Print 2011 / 352 pp. / 17.8 × 23.5 cm ISBN-978-81-203-4304-7 / 350.00

Quantum Mechanics: A Textbook for Undergraduates

MAHESH C. JAIN, Reader in the Department of Physics at the Hindu College of the University of Delhi.

This textbook is written as a basic introduction to Quantum Mechanics for use by the undergraduate students in physics, who are exposed to this subject for the first time. Providing a gentle introduction to the subject, it fills the gap between the available books which provide comprehensive coverage appropriate for postgraduate courses and the ones on Modern Physics which give a rather incomplete treatment of the subject leaving out many conceptual and mathematical details.

The author sets out with Planck’s quantum hypothesis and takes the student along through the new concepts and ideas, providing an easy-to-understand description of core quantum concepts and basic mathematical structures. The fundamental principles and the mathematical formalism introduced, are amply illustrated through a number of solved examples. Chapter-end exercises and review questions, generally designed as per the examination pattern, serve to reinforce the material learnt. Chapter-end summaries capture the key points discussed in the text. Beside the students of physics, the book can also be used by students of chemistry and first-year students of all branches of engineering for gaining a basic understanding of quantum mechanics, otherwise considered a difficult subject.

The book helps students learn difficult concepts of quantum mechanics with simpler mathematics and intuitive language, but without sacrificing rigour. It has informal classroom type approach suitable for self-learning.


SANAT KUMAR CHATTERJEE, Professor of Physics, National Institute of Technology, Durgapur.

Designed for the undergraduate students of materials science, physics and metallurgical engineering, this text explains the theory of X-ray diffraction from first principles, that is, starting from diffraction by an electron to that by an atom, a crystal, and finally ending with a diffraction by a conglomerate of atoms either in the single crystal or in the polycrystal stage.

This Second Edition of the book includes a new chapter on Electron Diffraction as electron diffraction along with X-ray diffraction are complementary to each other and are also included in the curriculum. The book amply blends the theory with major applications of X-ray diffraction, including those of direct analysis of lattice defects by X-ray topography, orientation texture analysis, chemical analysis by diffraction as well as by fluorescence.

KEY FEATURES
• Set of numerical problems along with solutions
• Details of some different experimental techniques
• Unsolved problems and Review Questions to grasp the concepts.


Latest Print 2009 / 808 pp. / 17.8 × 23.5 cm

Basic Physics

KONGBAM CHANDRAMANI SINGH, Reader, Department of Physics, Sri Venkateswara College, University of Delhi.

As per the CBSE course structure, this well written textbook is meant for Class XII of Senior Secondary Schools (under the 10 + 2 pattern of education). It will also fulfil the requirement of various examinations faced by the students at 10 + 2 level.

The primary objective of this book is to help students develop a clear and logical understanding of the concepts of physics. The pedagogy followed in the book would help the students to have a firm grasp on the fundamentals of physics. The subject matter has been presented in simple language with a wide coverage from introductory to advanced level.

KEY FEATURES: The book contains
• 450 solved numerical problems
• 300 unsolved numerical problems for practice
• 550 very short questions with answers
• 750 multiple choice questions with answers
• Questions from last seven years’ CBSE examination papers.

Besides this, each chapter contains a Summary that reviews the important concepts and equations. Questions asked in various examinations—CBSE, Medical and Engineering—have been carefully embedded into various chapters as their parts.


Latest Print 2009 / 808 pp. / 17.8 × 23.5 cm
International System of Units: A Handbook on SI Units for Scientists and Engineers

K. SOMAN, a retired scientist from Indian Space Research Organisation (ISRO).

This book contains comprehensive reference material on the use of the International System of Units (SI system). It is now the world’s most widely used system of measurement, developed in 1960 from the metric system. As some countries, notably the United States and the United Kingdom, still continue to use customary units in addition to SI, this book also provides information on CGS, FPS and MKS systems of units.

The book is organized into 12 chapters. The first nine chapters acquaint the readers with the definitions of the base units in the SI system, application of prefixes, realization of derived and supplementary units, conversion factors, general physical data, and several examples to illustrate the use of conversion factors between the units used in different systems.

The book also contains engineering related data, in SI units, on properties of some metals, alloys and polymers for use by design engineers. Data on threaded fasteners is also presented in SI units. Besides, there is miscellaneous other information, such as properties of gases, paper sizes, solar system, and earthquake severity measurement scale, presented in the context of the use of the SI system.

The book will be useful as a handy guide to students of science and engineering, technicians, scientists and engineers, as well as authors and editors of technical books.


Latest Print 2012 / 120 pp. / 16.0 × 24.1 cm ISBN-978-81-203-3653-7 / 125.00

Elements of Solid State Physics, 3rd ed.

J.P. SRIVASTAVA, former Professor of Physics from Aligarh Muslim University, Aligarh and an Emeritus Scientist.

This revised and updated third edition of the text builds on the strength of previous edition and gives a systematic and clear exposition of the fundamental principles of solid state physics.

The text covers the topics such as crystal structures and chemical bonds, semiconductors, dielectrics, magnetic materials, superconductors and nanomaterials. What distinguishes this text is the clarity and precision with which the author discusses the principles of physics, their relations as well as their applications. The most notable features of this third edition are: a detailed discussion on the bonding and cohesion of atoms, the picture of Fermi level in extrinsic semiconductors, and a precise and elaborate treatment of grain boundaries. With the addition of the new sections and additional information, this third edition should prove highly useful for the students.

This book is designed for the course in solid state physics for B.Sc. (Hons.) and M.Sc. students of physics. Besides, the book would also be useful to students of electrical/ electronics and allied engineering disciplines.

NEW TO THE THIRD EDITION
• Specific nature of primary and secondary bonds distinguished (Chapter 2).
• A new section on the Fermi Level in Extrinsic Semiconductors (Chapter 9).
• A conceptualized view of Burgers vector and a precise and elaborate account of grain boundaries (Chapter 12).
• Two new sections on The Limit of Smallness and Hazard, Hope and Hype (Chapter 16).


Latest Print 2013 / 616 pp. / 17.8 × 23.5 cm ISBN-978-81-203-4324-5 / 450.00
**Elements of Space Physics**

R.P. SINGHAL, Professor, Department of Applied Physics, Institute of Technology, Banaras Hindu University (BHU).

Primarily intended for the students of M.Sc. (Physics) and five-year integrated M.Tech (Engineering Physics) for their courses on space physics, this concise and systematically organized text covers all the essential aspects of physical and chemical processes in the planetary-spheres. This book is an attempt to collect various topics in solar system and planetary physics at one place in a comprehensive manner. It describes the phenomena of planetary atmospheres, ionospheres and magnetospheres. Beginning with the physics of the Sun, i.e., some aspects of astrophysics which serves as prerequisite for other chapters, this book covers the basic characteristics of the planetary system, their interaction with solar wind and plasma waves, aurora and airglow, and planetary atmospheres with special reference to their composition and temperature. Finally it discusses cosmic rays and cometary physics. The text includes mathematical derivations followed by observations on each planet which is supported by numerous figures and tables.

**KEY FEATURES**
- Gives mathematical formulations in general, which can be applied to any planet.
- Provides adequate number of illustrations.
- Offers easy mathematical derivations with the help of simple aids at appropriate places.
- Includes large number of literature references.

Besides postgraduate students, this text will also be useful for the researchers as a reference book.


Latest Print 2009 / 320 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-3710-7 / ` 295.00

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**Introduction to Solid State Physics**

ARUN KUMAR, Reader in the University Department of Physics, Ranchi University, Ranchi.

This textbook provides a comprehensive introduction to the physical properties of crystalline solids. It explains the structure of crystals, theory of crystal diffraction and the reciprocal lattice. As the book advances, it describes different kinds of imperfections in crystals, bonding in solids, and vibration in one-dimensional monoatomic and diatomic linear lattice. Different theories of specific heat, thermal conductivity of solids and lattice thermal conductivity are thoroughly dealt with. Coverage also includes the free electron theory, band theory and semiconductors. In addition, the book also describes in detail the magnetic properties of solids and super-conductivity. Finally, the book includes discussions on lasers, nanotechnology and the basic principles of fibre optics and holography.

**KEY FEATURES**
- Puts a conceptual emphasis on the subject.
- Includes numerous diagrams and figures to clarify the concepts.
- Provides chapter-end exercises to test the knowledge acquired.

The book is designed to meet the requirements of undergraduate and postgraduate students of physics and also for the engineering students for their courses in solid state physics, condensed matter physics and material science.


Latest Print 2010 / 512 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-4070-1 / ` 325.00
R.K. SRIVASTAVA, Formerly Professor of Ranchi University.
J. ASHOK, Head of the Department of Physics, Ranchi College, Ranchi University.

Statistical Mechanics is an integral part of theoretical physics, and this book aims at presenting the fundamentals of statistical mechanics in a clear and concise manner.

The book begins with a clear exposition of classical as well as quantal equilibrium statistical mechanics. Then it moves on to give insights into the Gibbs canonical distribution, the grand canonical distribution, ideal Bose gas, ideal fermi gas, and imperfect gases. The text also delves into certain topics of special interest, such as phase-transitions, Ising model, and liquid Helium. The book concludes with a discussion of some selected topics of nonequilibrium statistical mechanics.

Primarily intended as a text for postgraduate students of physics, it would also prove useful for students at the undergraduate level.

KEY FEATURES
• Comprehensive and lucid discussion on the fundamentals of statistical mechanics.
• Chapter-end exercises enable to test the conceptual understanding and analytical skills of the students.

Relativity, apart from quantum mechanics, is the greatest wonder in science, unfolded single-handedly in the 20th century by Albert Einstein. The scientist developed special relativity as a logical sequel to general relativity. This comprehensive book presents explication of the conceptual evolution and mathematical derivations of the theories of special and general relativity. The book follows an Einsteinian approach while explaining the concepts and the theories of relativity.

Divided into 14 chapters, the book covers elementary concepts of Special relativity, as well as the advanced studies on General relativity. The recent theories like Kerr geometry, Sagnac effect, Vaidya geometry, Raychaudhuri equation and Gravitation physics vis-à-vis Quantum physics are presented in easy-to-understand language and simple style. In addition to it, the book gives an in-depth analysis on the applications of advanced theories like Vaidya-Krori-Barua solution from author’s own research works. Apart from that, the book also discusses some of the isotopic and anisotropic cosmological models, in detail.

KEY FEATURES
• Step-by-step derivation of equations
• Easy demagogic approach
• Review questions to widen the analytical understanding of the students

This book is intended for the undergraduate and postgraduate students of Physics and Mathematics.

CONTENTS:
**Statistical and Thermal Physics: An Introduction**

S. LOKANATHAN, Emeritus Fellow, University of Rajasthan.
R.S. GAMBHIR, Professor of Physics at the University of Jodhpur.

A standard text combining statistical physics with thermal phenomena, this book presents a unified approach to provide a deeper insight into the subject and to bring out the subtle unity of statistical mechanics and thermodynamics.

Suitable as a text for undergraduate courses in physics.

**KEY FEATURES**

- Presents a new pedagogical approach introducing macroscopic (classical) thermodynamics through the statistical mechanics. This new approach is increasingly sought to be introduced worldwide.
- Magnitudes of physical quantities under discussion are emphasized through worked-out examples.
- Questions and exercises are interspersed with the text to help students consolidate the learning.
- Techniques developed in this course are applied to actual modern situations.
- Many topics are introduced through the problems to help inculcate self-study.


Latest Print 2013 / 280 pp. / 16.0 × 24.1 cm

R.C. SRIVASTAVA has worked as Professor of Chemistry at the Harcourt Butler Technological Institute, Kanpur as well as at BITS, Pilani and Banaras Hindu University. Professor Srivastava is a Fellow of The National Academy of Sciences, India.

SUBIT K. SAHA, Assistant Professor of Chemistry at BITS, Pilani.

ABHAY K. JAIN, Professor in the Department of Chemistry, Deen Dayal Upadhyaya Gorakhpur University.

Though thermodynamics is a tool used in all sciences and technologies, this book is especially designed to acquaint science students with the whole breadth of the subject covering both equilibrium and non-equilibrium regions. Equilibrium thermodynamics covered in the first-seven chapters caters to the needs of students up to the B.Sc./B.Sc. (Hons.) level. The next three chapters devoted to non-equilibrium thermodynamics and network thermodynamics fulfill the needs of the syllabi on these topics introduced in most universities at the postgraduate level. Chapters on 'The Question of Ideality' and 'The Non-linear Region' were the new additions to the second edition. In the third edition a new chapter on "Causality Principle in Non-equilibrium Thermodynamics" has been added. The readers may find the new chapter intellectually stimulating.

The book is an accessible, straightforward discussion of basic topics, beginning with the laws of thermodynamics and focusing on derivations of basic relations. The text is suitably illustrated throughout with examples of various applications of interest to science students. It explains concepts systematically, teaches problem-solving meaningfully, and includes concept-eliciting questions that are intended to reinforce the student's understanding of the material.


Latest Print 2012 / 152 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4637-6 / 150.00

Design and Analysis of Experiments

M.K. SHARMA, Professor in University of Gondar, Ethiopia.
B.V.S. SISODIA, Professor and Head, Department of Agricultural Statistics at Narendra Deva University of Agriculture and Technology, Faizabad, Uttar Pradesh.

Designed primarily as a text for undergraduate and postgraduate students of statistics, the book introduces the readers to the fundamentals of Galois field and finite geometry. It lays emphasis on different aspects of construction of Design and Experiments with Projective geometry and Euclidian geometry. The book deals with the construction of mutually orthogonal latin squares (MOLS) and Hyper Graeco-Latin square and discusses construction of incomplete block design such as balanced incomplete block design (BIBD), partially balanced incomplete block design (PBIBD), including Lattice designs and \( \alpha \)-Designs based on Galois field. Besides, the book focuses on co founding in factorial experiments, and it also describes quadratic residue as well as orthogonal arrays through Galois field. A separate chapter on Analysis of block design is included which contains some of the concepts developed recently.


Latest Print 2012 / 152 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4637-6 / 150.00
Statistics

E. NARAYANAN NADAR, Associate Professor and Head, Department of Economics, V.H.N. Senthikumara Nadar College, Virudhunagar, Tamil Nadu.

Statistics is vital to decision making in business and our everyday lives. This book on statistics covers both the theoretical and the practical aspects of statistics which facilitate easy understanding of the fundamentals.

The text begins with an introduction of statistics and describes statistical survey and sampling methods. It discusses collection, classification, tabulation, as well as diagrammatic and graphical presentation of data very lucidly. The book then goes on to explain measures of central tendency or averages, measures of dispersion, measures of skewness, kurtosis and moments, and correlation and regression. Finally, index numbers, time series analysis, probability and theoretical distributions, along with vital and population statistics, are discussed in a clear way.

This book is primarily designed for undergraduate and postgraduate students of economics, commerce and management. In addition, it will be of great benefit to the students of mathematics, physics, biology and demography.

KEY FEATURES

• Includes numerous illustrative examples with solutions throughout the text to illustrate the application of the concepts.
• Incorporates a large number of tables, diagrams and graphs to help students understand the concepts clearly.
• Provides chapter-end exercises to enable students to test their comprehension of the topics discussed.


Latest Print 2011 / 452 pp. / 17.8 × 23.5 cm

Statistics Made Simple: Do It Yourself on PC, 2nd ed.

K.V.S. SARMA, Professor, Department of Statistics, Sri Venkateswara University, Tirupati.

This textbook, now in its second edition, is designed for the students opting for courses in research methodology. It is also intended for the postgraduate students of population studies, sociology, economics, psychology and anthropology.

Written in a reader-friendly style, this thoroughly revised text teaches the students how to handle data and get the desired output through commonly available software like Microsoft Office 2007 and Excel using a step-by-step approach. Real-life data have been analyzed and illustrated through graphs, tables and screenshots. An entire chapter is devoted to Crystal Reports (CRP) software, which is currently used for rendering custom-designed reports from databases.

This book will also benefit all those professionals who are not aware of the use of computer for data handling and statistical analysis.

NEW TO THIS EDITION

• The earlier chapter on Data Handling and Statistics through FoxPro has been replaced by a new chapter titled Data Handling and Statistics through MS-Access.
• Chapter 10 on FoxPro Programming for Quick Statistics has been replaced by a new chapter titled Data Analysis using Crystal Reports.
• Statistical analysis with SPSS has been thoroughly revised.
• Several new examples and exercises have been included.


Latest Print 2012 / 304 pp. / 16.0 × 24.1 cm
ISBN-978-81-203-4017-6 / ₹ 250.00
(with CD-ROM)

SAHADEB SARKAR, Professor of Statistics in the Operations Management Group at the Indian Institute of Management Calcutta.

This well-received book, now in its second edition, is designed for an introductory course in statistics for students of statistics, mathematics and management. In addition, postgraduate students of a variety of disciplines such as psychology, sociology, anthropology, biology, nursing and criminal justice, as well as professionals, surveyors and administrators will also find this book extremely helpful. The book provides students with a strong foundation in the principles of statistics. It develops a thorough understanding of the fundamental concepts through extensive use of illustrative and motivating examples and shows how these concepts can be applied to real-life situations.

The text explains each statistical technique and formula in a step-by-step manner with the help of small datasets. While discussing a wide range of topics, mathematical complexity has been kept at a bare minimum, and intuitive ideas have been given for each mathematical expression. Key concepts have been highlighted in boxes throughout the text. Chapter-end summaries in the form of flowchart capture all the important points. Chapter-end exercises with answers and the Question Bank containing about 150 questions offer the students the opportunity to test their ability to comprehend the concepts. Besides, this text illustrates the use of SPSS and Excel in carrying out statistical analysis.

Solutions Manual containing the complete worked-out solutions to chapter-end exercises and Question Bank is available for instructors.

CONTENTS:

Latest Print 2013 / 472 pp. / 17.8 × 23.5 cm

Statistics for Business and Marketing Research

KISHORE K. DAS, Reader in the Department of Statistics, Gauhati University.
DIBYOJYOTI BHATTACHARJEE, Reader in the Department of Business Administration, Assam University.

This book is primarily intended for BBA, MBA, and MCom students for their courses in Business Statistics/Statistics for Management. Students of BSc (Statistics) will also find this book useful as a ready source of reference. It discusses the fundamental concepts with illustrative examples and applications to various business problems.

The book covers all the essential topics of statistics such as frequency distribution and graphical representation, measures of central tendency and dispersion, moments, skewness and kurtosis, probability theory, random variables, probability distributions, correlation and regression.

KEY FEATURES
- Provides sound theoretical knowledge underlying different statistical techniques.
- Explains topics with practical examples to help students understand the relevance of the subject in solving business problems.
- Presents the relevant proofs of theorems and formulae to establish how such rules came into existence.
- Gives an extended list of worked-out problems to enable students to understand how the statistical techniques can be applied to business related issues.
- Lists a host of unsolved problems at the end of each chapter to help students test their understanding of the subject.


Latest Print 2013 / 232 pp. / 17.8 × 23.5 cm

PHI Learning: Publications
This compact and well-received book, now in its second edition, is a skilful combination of measure theory and probability. For, in contrast to many books where probability theory is usually developed after a thorough exposure to the theory and techniques of measure and integration, this text develops the Lebesgue theory of measure and integration, using probability theory as the motivating force.

What distinguishes the text is the illustration of all theorems by examples and applications. A section on Stieltjes integration assists the student in understanding the later text better.

For easy understanding and presentation, this edition has split some long chapters into smaller ones. For example, old Chapter 3 has been split into Chapters 3 and 9, and old Chapter 11 has been split into Chapters 11, 12 and 13.

The book is intended for the first-year postgraduate students for their courses in Statistics and Mathematics (pure and applied), computer science, and electrical and industrial engineering.

KEY FEATURES
- Measure theory and probability are well integrated.
- Exercises are given at the end of each chapter, with solutions provided separately.
- A section is devoted to large sample theory of statistics, and another to large deviation theory (in the Appendix).


Latest Print 2012 / 240 pp. / 16.0 x 24.1 cm
ISBN-978-81-203-4385-6 / 225.00
This well-organised and lucid text on Research Methodology is intended to fulfill the felt-need for an introductory, accessible and student friendly book. Written with the aim of making the teaching and learning of research methods and methodology simple, the book provides theoretical information in an operational manner about the various methods, techniques and procedures followed in research.

This book based on the practical experiences of the authors as researchers, practitioners and teachers intends to cater to the needs of students of MBA, BBA, Humanities and Social Sciences. The book will also be of immense use to the researchers, practicing managers and public health organisations.

**KEY FEATURES**

- Contains case studies and sample questionnaires.
- Covers brief knowledge of statistics and its applications required in research.
- Objective type questions, review questions, sample question papers and previous years’ examination papers have been included for brushing up of the knowledge.
- Gives working knowledge of various useful computer software used in the research analysis such as SPSS, Excel etc.
- Report writing is explained in the systematic manner explaining the process, layout, types, mechanics involved, various principles and precautions to be taken while writing a good report to make the research worth.

**CONTENTS:**
Intended to serve as a text for postgraduate students of commerce, management, and social sciences, and especially for the first-time researchers, this well-organized book deals with the variety of research methods used in management and social sciences, with particular emphasis on the implementation of these methods. It offers readers practical guidelines for research and directs them through all the stages of research—from identifying a viable research project to the submission of a dissertation, report, or research article.

The text identifies three dimensions of research methodology—research strategies, research methods and research data—that provide a structure for the book.

**KEY FEATURES**
- Many real-world examples extracted from actual research projects of students will help the readers develop their research skills.
- Due attention is given to both quantitative and qualitative research methodologies in order to help readers make informed choices about methods.
- Statistical appendices are provided to acquaint readers with the underlying mathematical concepts involved in the research methods discussed.

**CONTENTS:**
- Preface.
- Acknowledgements.
- An Overview of Research Methodology. Setting up a Research Project.
- Case Studies as a Methodological Strategy.
- Surveys as a Methodological Strategy.
- Experiments as a Methodological Strategy.
- Action Research as a Methodological Strategy.
- Interview Methods. The Use of Questionnaires.
- Observational Methods. Documentary Sources.
- The Concept of Level of Measurement.
- Methodology of Analysing Quantitative Data.
- Methodology of Analysing Qualitative Data.
- Writing About Research.

**Latest Print 2012 / 408 pp. / 17.8 × 23.5 cm**

**E-book**
SCIENTES AND MATHEMATICS
Statistics (Statistical Inference)

Statistical Inference: Theory of Estimation

MANOJ KUMAR SRIVASTAVA, Associate Professor, Department of Statistics, Institute of Social Sciences, Dr. B.R. Ambedkar University (formerly Agra University), Agra.

ABDUL HAMID KHAN, former Dean, Faculty of Science and Chairman, Department of Statistics and Operations Research, Aligarh Muslim University (AMU), Aligarh.

NAMITA SRIVASTAVA, Associate Professor, Department of Statistics, St. John’s College, Agra.

This book is sequel to a book Statistical Inference: Testing of Hypotheses (published by PHI Learning). Intended for the postgraduate students of statistics, it introduces the problem of estimation in the light of foundations laid down by Sir R.A. Fisher (1922) and follows both classical and Bayesian approaches to solve these problems.

The book starts with discussing the growing levels of data summarization to reach maximal summarization and connects it with sufficient and minimal sufficient statistics. The book gives a complete account of theorems and results on uniformly minimum variance unbiased estimators (UMVUE)—including famous Rao and Blackwell theorem to suggest an improved estimator based on a sufficient statistic and Lehmann-Scheffe theorem to give an UMVUE. It discusses Cramer-Rao and Bhattacharyya variance lower bounds for regular models, by introducing Fishers information and Chapman, Robbins and Kiefer variance lower bounds for Pitman models. Besides, the book introduces different methods of estimation including famous method of maximum likelihood and discusses large sample properties such as consistency, consistent asymptotic normality (CAN) and best asymptotic normality (BAN) of different estimators.

Separate chapters are devoted for finding Pitman estimator, among equivariant estimators, for location and scale models, by exploiting symmetry structure, present in the model, and Bayes, Empirical Bayes, Hierarchical Bayes estimators in different statistical models. Systematic exposition of the theory and results in different statistical situations and models, is one of the several attractions of the presentation. Each chapter is concluded with several solved examples, in a number of statistical models, augmented with exposition of theorems and results.


Statistical Inference: Testing of Hypotheses

MANOJ KUMAR SRIVASTAVA, Associate Professor, Department of Statistics, Institute of Social Sciences, Dr. B.R. Ambedkar University, Agra.

NAMITA SRIVASTAVA, Associate Professor, Department of Statistics, St. John’s College, Agra.

Intended as a textbook for a core paper on Statistical Inference: Testing of Hypotheses at the undergraduate level, and one semester course at the master’s level, it emphasizes on J. Neyman and Egon Pearson’s mathematical foundations of hypothesis testing, which is one of the finest methodologies of reaching conclusions on population parameter.

Following Wald and Ferguson’s approach, the book presents Neyman-Pearson theory under broader premises of decision theory resulting into simplification and generalization of results. On account of smooth mathematical development of this theory, the book outlines the main result on Lebesgue theory in abstract spaces prior to rigorous theoretical developments on most powerful (MP), uniformly most powerful (UMP) and UMP unbiased tests for different types of testing problems. Likelihood ratio tests their large sample properties to variety of testing situations and connection between confidence estimation and testing of hypothesis have been discussed in separate chapters.

The book illustrates simplification of testing problems and reduction in dimensionality of class of tests resulting into existence of an optimal test through the principle of sufficiency and invariance. It concludes with rigorous theoretical developments on non-parametric tests including their optimality, asymptotic relative efficiency, consistency, and asymptotic null distribution.

The book also serves as a ready reference for the researchers in the areas of agricultural statistics, biostatistics and econometrics.

This is a comprehensive exposition of survey sampling useful both to the students of statistics for the course on sample survey and to the survey statisticians and practitioners involved in consultancy services, marketing, opinion polls, and so on. The text offers updated review of difficult classical techniques of survey sampling, besides covering prediction-theoretic approach of survey sampling and nonsampling errors.

NEW TO THIS EDITION
Two new chapters—Nonparametric Methods of Variance Estimation (Chapter 19) and Analysis of Complex Surveys (Chapter 20)—have been added. These would greatly benefit the readers.

KEY FEATURES
• Covers concepts of unequal probability sampling.
• Provides problems of making inference from finite population using tools of classical inference.
• Describes nonsampling errors including Randomised Response Techniques.
• Gives over 70 worked-out examples and more than 120 problems and solutions.
• Supplies live data from India and Sweden—in examples and exercises.

What the Reviewer says:
This is a very comprehensive modern text on survey sampling with a strong slant towards theoretical results. The book is an excellent reference book and would be a good graduate level sampling text for a course with an emphasis on sampling theory.

— JESSE C. ARNOLD
Virginia Polytechnic Institute and State University

CONTENTS:

Latest Print 2013 / 580 pp. / 17.8 x 23.5 cm
ISBN-978-81-203-3676-6 / $ 495.00
SCIENCES AND MATHEMATICS

Zoology

Aquaculture Technology and Environment

UJWALA JADHAV, Reader, Department of Life Sciences, University of Mumbai, Mumbai.

Aquaculture, farming of aquatic animals and plants, is one of the world’s fastest growing food production systems. This text provides an excellent elucidation of the concepts of aquaculture along with its impact on the environment.

Written in a style that makes the subject both interesting to read and easy to understand, this text describes the scope and principles of aquaculture, and the design and management of a typical aquaculture/fish farming. It explains different types of culture systems and practices, as well as different criteria for the selection of species for culture. The text discusses some common diseases in aquaculture and measures to prevent them. It further elaborates the importance of a balanced diet for aquatic species and focuses on harvesting and post-harvesting technology.

This book discusses in detail the role of biotechnology in aquaculture. In addition, it deals with different aquaculture practices in India, such as culture of carp, prawn, pearl and seaweed. The text concludes with a discussion on the effects of aquaculture practices on the environment.

KEY FEATURES

• Provides a list of major important aquaculture species cultured worldwide.
• Presents the latest data to enhance the utility of the text.
• Gives special emphasis on aquaculturists and environmentalists.

The book is intended for undergraduate and postgraduate students of zoology (B.Sc. and M.Sc.) and fisheries (B.F.Sc. and M.F.Sc.). It will also be useful to aquaculturists and environmentalists.


Latest Print 2009 / 352 pp. / 17.8 x 23.5 cm

Basic Physiology

S. SREEKUMAR, has been the Principal of C.K.G.M. Government College, Perambra, Kozhikode.

Dealing with comparative physiology with major focus on human physiology, this book stresses fundamental concepts to give a firm grounding in physiology.

Beginning with foundations of physiology, the book discusses physiologically important biomolecules, action of enzymes and role of vitamins and minerals. It then presents in a comprehensive manner the organ system physiology comprising digestive, respiratory, circulatory, excretory, nervous, muscular, endocrine and reproductive systems. The book also includes a chapter on homeostasis and environmental adaptations.

The book is designed for undergraduate students of Zoology and Life Sciences. It would also be useful to postgraduate students of Zoology and Life Sciences as well as to those preparing for competitive examinations.

KEY FEATURES

• Illustrates topics with suitable diagrams for a clear-cut grasp of the topics.
• Provides model question papers to help students reflect upon their understanding of the subject matter.


Latest Print 2010 / 352 pp. / 17.8 x 23.5 cm
Economic Zoology

VINITA JAISWAL, Lecturer of Zoology at CMP College, University of Allahabad, Allahabad.
KAMAL KUMAR JAISWAL was Lecturer of Botany at University of Mumbai.

The present book is a novel attempt to make available the students an exhaustive, interesting and valuable information on the subject of Economic Zoology. All kinds of animal pathogens such as protozoans, helminths, nematodes, mites and ticks and household insects, directly or indirectly causing diseases in other animals including humans, have been described in detail covering every aspect of their life history along with the symptoms appearing on the hosts and their prevention, control and cure. Furthermore, along with the animal pathogens mentioned above, plant pathogens, such as insects, acting as pests of a variety of crops have also been described in full detail. Apart from the harmful effects, animals are also beneficial to mankind. This seems to be justified when we go through the chapters relating to apiculture, lac culture and sericulture along with fisheries, prawn culture, pearl culture, cattle farming, pig farming and poultry farming.

KEY FEATURES
• Chapters enriched with photomicrographs present a realistic description.
• Exclusive life cycle diagrams of pathogens are helpful in understanding important events of their life.
• Exhaustive coverage of the subject matter help students to understand the concepts with clarity and provide a wide range of information in a single volume.
• Chapter-end review questions help students to prepare for the examinations and assess their subject knowledge.


Latest Print 2014 / 280 pp. / 21.6 x 27.8 cm
ISBN-978-81-203-4886-8 / ₹ 495.00

Human Parasitology

FATIK BARAN MANDAL, Associate Professor in Zoology, Bankura Christian College, Bankura, West Bengal.

This well-organized book discusses the morphology and life cycle of human parasites, as well as the mode of transmission, incidence, symptoms, diagnosis, treatment and prevention of parasitic diseases. It also explains the concept of zoonotic diseases, adaptive features and disease management in light of recent studies. The book emphasizes the evolutionary and eco-physical aspects of human parasites and shows how parasitic infection spreads today. The book is intended as a text for the undergraduate and postgraduate students of Zoology and Life Sciences. In addition, it would also be highly valuable for public health workers and health professionals.

KEY FEATURES
• Explains the life cycle of each parasite with the help of diagrams.
• Deals with newly discovered parasites such as cryptosporidium purvum and cyclospora cayentanensis.
• Discusses the emerging food-borne, water-borne and vector-borne diseases.
• Contains a glossary of important terms related to human parasitology.


Latest Print 2011 / 280 pp. / 21.6 x 27.8 cm
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This well-accepted book, now stands in its second edition, is a time-honoured revision and extension of the previous edition. Beginning with an introduction to the study of animal behaviour, the book explains the various aspects of behavioural biology incorporating a wealth of information from molecular biology, neurobiology, and socio-biology with a new approach. It describes different kinds of innate and learned behaviours, animal communications, defensive behaviours such as camouflage and mimicry with suitable illustrations. The book incorporates the introductory concepts of biomimicry in an attractive manner. Further, it discusses biorhythms, migration in fish and birds, in addition to evolution and physiological basis of migration. The text also presents the important aspects of socio-biology and social behaviours, such as feeding, adaptation, prey defence, territoriality, aggression, altruism, sexuality, and parental care. Finally, it provides discussions on behavioural ecology in the context of conservation biology, and human behaviour. The book presents the basic principles of animal behaviour with the aid of carefully selected examples from both the recent and classic literature along with an emphasis on readability.

In the present edition, topics like eusociality and behavioural theories have been incorporated. This edition also includes as many as 11 published articles by the author on different topics related to the subject matter in box format to further strengthen the text.

The book is primarily intended for the students of B.Sc./M.Sc. (Zoology/Life Science) for their courses. It would be useful for the researchers in the field of animal behaviour, and conservation biologists. It would also attract readership studying Sociology and Anthropology.


Latest Print 2012 / 364 pp. / 21.6 × 27.8 cm
Sustainable and Responsible Tourism: Trends, Practices and Cases

Editor: PARIKSHAT SINGH MANHAS, Associate Professor, The Business School and School of Hospitality & Tourism Management, University of Jammu, J&K, India. He is also a Visiting Professor at Graduate School of Business, ESAN University, Lima, Peru.

Tourism is one of the most dynamic and challenging industries across the globe. Since tourism is a multi-dimensional service industry, it becomes a responsibility of national and local governments, private sectors and voluntary organizations to make it more sustainable and responsible for minimizing negative environmental, social and cultural impacts and generating greater economic benefits for local residents. Moreover, it has become an immediate need to conserve natural and cultural heritage for the maintenance of the world’s diversity.

The present anthology, divided into three sections and comprising 16 chapters, addresses the need of sustainable and responsible tourism. It provides vibrant insights into the latest trends and practices followed in the industry for the sustenance of tourism. The book emphasizes the potential of tourism in upgrading national economy and social well-being of host communities. Besides, it focuses on the areas of important concerns which require critical attention, such as visitor impact management, tourism destination management, community involvement for tourism sustenance and the threat of climatic change on biodiversity and tourist destination.

The book also guides readers towards new horizons of tourism arena related to sustainability and responsible tourism practices. This book will be of great interest to the students of hospitality and tourism management. Besides, it will prove to be of great use to policy makers, stakeholders, tourism educators and researchers.

CONTENTS: Foreword. Preface. Section I: Sustainable and Responsible Tourism—Regional Development and Sustainability: Cultural Tourism in the Southern Region of Jalisco by Dr. José G. Vargas-Hernández. The Application of Sustainable Tourism Indicators in the Development of Taman Rimba Telok Bahang, Penang, Malaysia by Dr. Jalil Mapajibui and Dr. Azizan Marzuki. Rural Tourism Development: Constraints and Potential with a Special Reference to Agri Tourism (A Case Study on Cashew Agri Tourism Destination—Rajendrapattinam Village in Vridhdhachalam Taluk of Cuddalore District, Tamil Nadu) by Dr. A. Balamurugan, Dr. R. Kannan and Dr. S.K. Nagarajan. Changing Expectations of Traditional Pilgrims: An Analysis of Expectations and Motivations of Tourists Visiting Badri-Kedar Tourism Zone by Dr. S.K. Gupta and Dr. Vijay Prakash Bhatti. A Comparative Analysis of Mwalughanje Elephant Sanctuary and Rukinga Wildlife Sanctuary in Kenya by Dr. Margaret Wacha Gichuki. Environmental Practices a Medium Size Hotel—A Case Study Approach by Dr. Sharleen Howison and Ms. Dogmar Cronauer. Planning Considerations for Tourism in the Minho-Lima Region (Northwest Portugal) by Dr. Paula Cristina Remoaldo, Dr. José Cadima Ribeiro, Dr. Laurentina Cruz Vareiro and Dr. Mécia Cunha Mota. Section II: Community Development by Tourism—Development of a Standard Measurement Scale to Measure Community Attitude Towards Impacts of Tourism in Malaysia by Dr. Nurhazani Mohd Shafii, Dr. Nor Asyikin Mohd Nor, Ms. Jasmine Zee Raziah Radha Rashid Radha and Ms. Hasni Hasnah Che Ismail. Community-based Ecotourism and Sustainable Development Supported by Case Study—Kumaon Himalayas (Lake District of Uttarakhand) by Dr. Bipin Chandra Pant. Section III: Case Studies and Practices on Tourism Trends—Tourist’s Use of Public Transport Information: A Case Study in Penang Island by Mr. Ng Kok Meng. Rebuilding Destination Functionality: A Strategic Framework Towards Crisis Communication by Dr. Parikshat Singh Manhas and Dr. Zubair Ahmad Dada. Trust in the Online Hotel Booking Decision by Dr. Pauline Rattinganurak and Dr. Kuldeep Kumar. Endogenous Project on Rural Tourism: A Case Study of Kalamkari by Dr. P.S. Reddy. Causality between Tourism and Education by Dr. G.S. Premakumara and Dr. Riyaz Ahmad. Greening the Marikina City: Cycling as an Alternative Transportation by Dr. Joy Shellah B. Era and Ms. Evangeline E. Timbang. The Study of Relationship between Climate and Annual Tourism Trends Condition; Case of Tabriz, Iran by Dr. Banafsheh M. Farahani and Dr. Jafar Moshavand.

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