



CATALOGUE

CIVIL & MECHANICAL ENGINEERING

www.schandpublishing.com

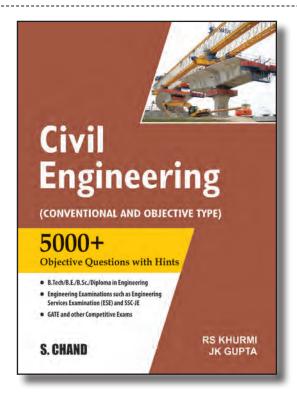
## **Contents**

## **Engineering & Technology**

•	Civil Engineering	01-13
•	Mechanical Engineering	14-41
•	Check List	42-44

### Civil Engineering





## Civil Engineering (Conventional and Objective Type)

RS Khurmi & JK Gupta

#### **About the Book**

For more than 30 years "Civil Engineering: Conventional and Objective Type" continues to be a comprehensive text aided by a collection of multiple-choice questions specifically for aspirants of various competitive examinations such as GATE, UPSC, IAS, IES and SSC-JE among others as well as students who are preparing for university examinations.

The new edition contains 17 chapters where every important concept of Civil Engineering is fairly treated. On the other hand, the questions provided in this book have been selected from various potent resources to provide the students with an idea of how the questions are set and what type of questions to expect on the final day

#### **Salient Features**

- Divided in 17 chapters containing more than 5000+ questions with hints provide rich practice
- · Over 1000 graphs and figures providing ample support to the theory explained

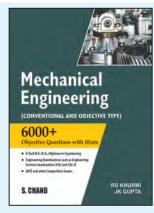
ISBN: 9789355014443 | Price: ₹ 750 | Pages: 616 | Size: 8" X 10.5" (Paperback)

#### **Contents**

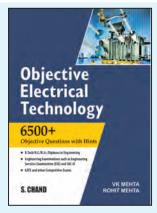
- 1. Engineering Mechanics
- 2. Strength of Materials
- 3. Hydraulics and Fluid Mechanics
- 4. Hydraulic Machines
- 5. Surveying
- 6. Building Materials

- 7. Irrigation Engineering
- 8. Environmental Engineering (Public Health Engineering)
- 9. Highway Engineering (Transportation Engineering-I)
- 10. Railway Engineering
  (Transportation EngineeringII)
- 11. Soil Mechanics and Foundations
- 12. Building Construction
- 13. Concrete Technology
- 14. Reinforced Cement Concrete Structures
- 15. Steel Structures Design
- 16. Construction Management
- 17. Engineering Geology

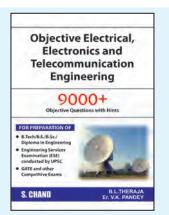
Objective Series for B.Tech/
B.E./B.Sc./
ESE & GATE
Examinations



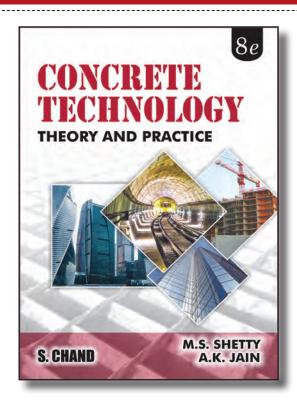
ISBN: 9789355014450 ₹ 799



ISBN: 9789355014467 ₹ 895



ISBN: 9788121925716 ₹ 795



# Concrete Technology Theory and Practice, 8e (LPSPE)

M.S. Shetty & A.K. Jain

#### **About the Book**

"Concrete Technology: Theoryand Practice" gives students of Civil Engineering a thorough understanding of all aspects of concrete technology from first principles. It covers types of Cement, Admixtures, Concrete strength, durability and testing with reference to national standards. For more than 30 years, the book has evolved to be a must-read for all students of the subject and has also been a useful reference book for practising engineers.

#### **Salient Features**

- Divided into 16 chapters, the book elucidates all theories in an apropos manner.
- THREE NEW Chapters on "Production and Placing of Concrete,
  "Temperature Control of Concrete at Early Ages and Extreme
  Weather Concreting" and "Repair Technology for Concrete
  Structures".
- More than 900 figures, tables and references strengthen the well-explained theoretical concepts.

ISBN: 9789352533800 | Price: ₹ 750 | Pages: 664 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

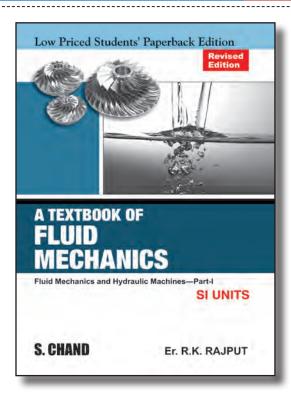
- 1. Cement
- 2. Types of Cement and Testing of Cement
- 3. Aggregates and Testing of Aggregates
- 4. Water
- 5. Admixtures and Construction Chemicals
- 6. Properties of Fresh Concrete
- 7. Production and Placing of Concrete
- 8. Strength of Concrete
- 9. Elasticity, Creep and Shrinkage

- 10. Durability of Concrete
- 11. Testing of Hardened Concrete
- 12. Concrete mix Design
- 13. Temperature Control of Concrete at Early Ages and Extreme Weather Concreting
- 14. Special Concretes and Concreting Methods
- 15. Self-Compacting Concrete
- 16. Repair Technology for Concrete Structure

**M S Shetty** is ex-HOD, Department of Construction Engineering, College of Military Engineering (CME), Ministry of Defence, Pune and VP Indian Concrete Institute. Apart from that he has been principal consultant for MC Bauchemie and Grasim Industries Ltd. among others.

**A K Jain** is alumini of IIT Roorkee/ IIT Delhi and fellow of Institution of Engineers (India), Indian Concrete Institute, Indian Roads Congress and Indian Building Congress.

## Civil Engineering



# A Textbook of Fluid Mechanics (LPSPE)

R.K. Rajput

#### **About the Book**

"A Textbook of Fluid Mechanics" provides a comprehensive coverage of the syllabus of Fluid Mechanics for different technical universities in India. Fluid mechanics has several categories, such as include Fluid kinematics, Fluid statics and Fluid dynamics.

A total of 16 chapters followed by two special chapters of 'Universities' Questions (Latest) with Solutions' and 'GATE and UPSC Examinations' Questions with Answers/Solutions' after each unit also make it an excellent resource for aspirants of various entrance examinations.

#### **Salient Features**

- Close to 1400 examples, figures, tables and chapter-end highlights aid to the concepts explained.
- Close to 900 chapter-end questions for practice.
- University Questions, GATE & UPSC Examination Questions and Laboratory Experiments at the end of the book add to the practice quotient of the students.

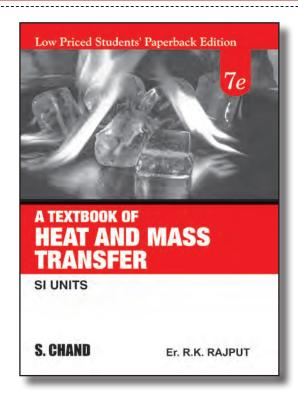
ISBN: 9789352837205 | Price: ₹ 750 | Pages: 1,056 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

- 1. Properties of Fluids
- 2. Pressure Measurement
- 3. Hydrostatic Forces on Surfaces
- 4. Buoyancy and Floatation
- 5. Fluid Kinematics
- 6. Fluid Dynamics
- 7. Dimensional and Model Analysis
- 8. Flow through Orifices and Mouthpieces
- 9. Flow Over Notches and Weirs
- 10. Laminar Flow
- 11. Turbulent Flow in Pipes
- 12. Flow through Pipes

- 13. Boundary Layer Theory
- 14. Flow Around Submerged Bodies—Drag and Lift
- 15. Compressible Flow
- 16. Flow in Open Channels
- Universities' Questions (Latest-Selected) with Solutions
- "GATE" and "UPSC" Examinations' Questions with Answers/Solutions (Latest-Selected)
- Laboratory Practical
- Index

**R K Rajput** is former principal Punjab College of Information Technology and Thapar Polytechnic College.



### A Textbook of Heat and Mass Transfer, 7e (LPSPE)

R.K. Rajput

#### **About the Book**

"Hear and Mass Transfer" is a comprehensive textbook for the students of Mechanical Engineering and a must-buy for the aspirants of different entrance examinations including GATE and UPSC.

Divided into 5 parts, the book delves into the subject beginning from Basic Concepts and goes on to discuss Heat Transfer (by Convection and Radiation) and Mass Transfer. The book also becomes useful as a question bank for students as it offers university as well as entrance exam questions with solutions.

#### **Salient Features**

- Introductory chapter explains all basic theories of the subject followed by 11 succinctly written chapters which encompass all basic concepts.
- Close to 950 examples, figures, tables and chapter-end highlights aid to the concepts explained.
- Close to 750 chapter-end questions, University Questions, GATE & UPSC Examination Questions and Laboratory Experiments for practice.
- Free On the Website: Chapter on "Radiation Exchange Between Surfaces"

ISBN: 9789352837212 | Price: ₹ 650 | Pages: 936 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Basic Concepts

#### Part-I: Heat Transfer by "Conduction"

- "Conduction" Heat Transfer at Steady State One Dimension
- 3. Conduction Heat Transfer at Steady State Two Dimensions and Three Dimensions
- 4. Heat Conduction—Transient (Unsteady State)

#### Part-II: Heat Transfer by "Convection"

- 5. Heat Transfer by "Forced Convection"
  - A. Laminar Flow
  - B. Turbulent Flow
- 6. Heat Transfer by "Free Convection"
- 7. Boiling and Condensation
- 8. Heat Exchangers

Part-III: Heat Transfer by "Radiation"

9. Heat Transfer by Radiation

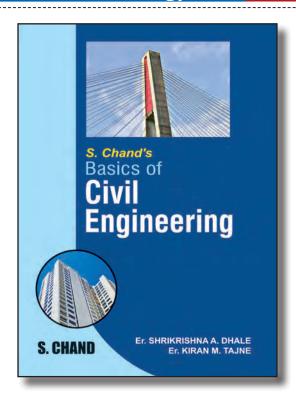
Part-IV: Mass Transfer

10. Mass Transfer

Part-V: Miscellaneous

- 11. Introduction to Hydrodynamics
- 12. Dimensional Analysis
- 13. Universities' Examinations Questions (Latest-Selected) with Answers/Solutions
- 14. Gate and UPSC Examinations' Questions (Latest-Selected) with Answers/Solutions
- Index

R.K. Rajput is former principal Punjab College of Information Technology and Thapar Polytechnic College.



### S. Chand's Basics of Civil Engineering

Er. Shrikrishna A Dhale & Er. Kiran M. Tajne



#### **About the Book**

Basics of Civil Engineering is considered as one of the basic subjects for all the engineering students of all branches. The contents of this book are framed in such a way that they will be useful to the technocrats who are working on the administrative positions to deal with the basic knowledge of Civil Engineering. The book contains 11 chapters where every important concept of Civil Engineering is fairly treated. It throws light on the basic areas of Civil Engineering such as Structural Engineering, Geotechnical Engineering, Hydraulics and Irrigation Engineering, Environmental Engineering, Surveying and Construction Technology. Thus, this book is a proper blend of all these.

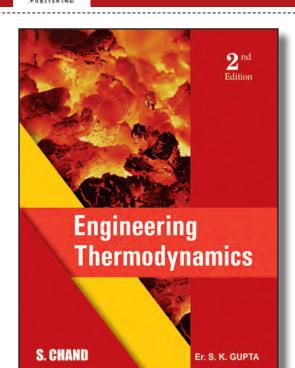
#### **Salient Features**

- · The book has been written in a simple and comprehensible language
- It covers all important topics, concepts, and principles for more focused learning
- · Over 150 graphs and figures providing ample support to the theory explained

ISBN: 9789355016133 | Price: ₹ 300 | Pages: 232 | Size: 6.5" X 9.25" (Paperback)

- 1. Introduction to Civil Engineering
- 2. General Concepts Related to Building
- 3. Components of Buildings
- 4. Building Materials
- 5. Surveying
- 6. Transportation Engineering
- 7. Environment and Natural Resource Management

- 8. Waste Management
- 9. Water Resources Engineering
- 10. Instrumentation In Civil Engineering Structures
- 11. Sustainable Development Concept Of Green Building
- Latest Question Paper 2012 With Hints



### **Engineering Thermodynamics, 2e**

### Er. SK Gupta

#### **About the Book**

Engineering Thermodynamics completely covers the subject for both the students of Mechanical and Civil Engineering (as per AICTE). With topics such as Fuels and Combustion, Refrigeration and Air-Conditioning and Air Compressors delved into deeply and as many as 14 new chapters, it becomes one of the most comprehensive Indian-authored texts.

#### **Salient Features**

- Complete Coverage: Of two core courses as per AICTE Mechanical Engineering (Subject Name: Thermodynamics) and Civil Engineering (Subject Name: Mechanical Engineering; Semester IV).
- · Pedagogically Strong:
  - · Point-wise chapter-end highlights for quick revision.
  - · Close to 1000 figures, tables and examples for better grasp of the topics.
  - Close to 1200 exercises, questions and objective type questions for better practice.
  - · Notes placed within chapters highlighting important concepts.
- 14 New Chapters on the following topics:
- Thermodynamic Relations (1 Chapter)
- Fuels and Combustion (3 Chapters)
- · Refrigeration and Air-Conditioning (4 Chapters)
- Heat Transfer (1 Chapter)
- Compressible Fluid Flow (1 Chapter)
- Air Compressors (3 Chapters)
- · Working and Testing of I.C. Engines (1 Chapter)

#### ISBN: 9789352834051 | Price: ₹ 1099 | Pages: 1,064 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

- 1. Basic Concepts
- 2. Zeroth Law of Thermodynamics
- 3. Ideal and Real Gases
- 4. First law of Thermodynamics
- 5. First Law Applied to Flow Processes
- 6. Second Law of Thermodynamics
- 7. Entropy, Availability and Irreversibility
- 8. Properties of Pure Substances

- 9. Vapour Processes
- 10. Vapour Power Cycles
- 11. Air Standard Cycles
- 12. Mixture of Gases
- 13. Thermodynamic Relations
- 14. Fuels
- 15. Combustion of Fuels
- 16. Reacting Mixtures and Combustion
- 17. Refrigeration Cycles
- 18. Vapour Compression and Absorption Refrigeration Systems

- 19. Psychrometry
- 20. Air Conditioning Systems
- 21. Heat Transfer
- 22. Compressible Flow of Fluids
- 23. Reciprocating Air Compressors
- 24. Rotary Air Compressors
- 25. Air Motors
- 26. Working and Testing of I.C. Engines

#### PROPERTIES OF STEAM

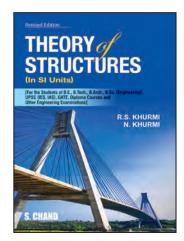
· Table 1: Properties of

Saturated Water and Steam (Pressure based)

- Table 2: Properties of Saturated Water and Steam (Temperature based)
- Table 3: Properties of Superheated Steam
- Chart 1: Mollier Diagram
- Chart 2: Psychrometric Chart

Er. SK Gupta is a post-graduate engineer and has good experience in technical education.





#### Theory of Structures (In SI Units)

R S Khurmi & N. Khurmi

#### **About the Book**

"Theory of Structures" covers the syllabus of most major Indian Universities.

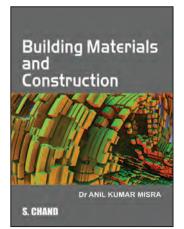
The book is designed for the students of Civil Engineering but is also useful for the students of B. Arch, B.Sc. and AMIE. It also contains typical examples (useful for students appearing in competitive examinations in particular), highlights and unsolved examples. The book is aptly divided into 6 parts which is further sub-divided into 23 chapters ranging from topics like Beams, Bridges to Stresses and Deflection, Fixed beams to redundant frames and columns and struts.

#### **Salient Features**

- Introductory first chapter discusses not only discusses the basic concepts but also all Units and also Mathematical Review
- · Close to 900 figures, tables, examples and chapter-end highlights provide ample support to the theory explained
- In-text exercise questions provide practice to students as well as refresh the concepts explained in a practical manner.

ISBN: 9788121905206 | Code: 1010D00030 | Price: ₹ 840 | Pages: 728 | Size: 6.5" X 9.25" (Paperback) Contents

1. Introduction, **Part-1** 2. Rolling Loads, 3. Influence Lines for Beams, 4. Influence Lines for Trussed Bridges, **Part-2** 5. Direct and Bending Stresses (in Columns, Walls and Chimneys), 6. Dams and Retaining Walls, **Part-3** 7. Deflection of Beams, 8. Deflection of Cantilevers, 9. Deflection by Moment Area Method, 10. Deflection by Conjugate Beam Method, 11. Deflection of Perfect Frames, 12. Cables and Suspension Bridges, 13. Three-hinged Arches, **Part-4** 14. Propped Cantilevers and Beams, 15. Fixed Beams, 16. Three Moments Theorem (For Continuous Beams), 17. Slope Deflection Method, 18. Moment Distribution Method, 19. Column Analogy Method, 20. Two-hinged Arches, **Part-5** 21. Forces in Redundant Frames (Including Castigliano's & Maxwell's Theorems), **Part-6** 22. Columns and Struts, 23. Introduction to Plastic Theory, • **Appendix:**, 1. Angle of Repose and Characteristics of Commonly Retained Materials, 2. Slopes and Deflections for Different Loadings on Cantilevers and Beams, 3. Relation between the Actual Beam and Conjugate Beam, 4. Fixed Beam Loadings and Fixed End Moments, 5. Properties of Plane Areas, • *Index* 



#### **Building Materials and Construction**

#### Anil Kumar Misra

#### **About the Book**

"Building Materials and Construction" is primarily written for the students of Civil Engineering to make them familiar with building materials and construction practices to build their interest in the field. The book starts with explanation of building material concepts and goes on to explain all the important materials like Lime, Bricks, Cement, Timber, Concrete etc. in separate chapters following the same flow as prescribed in major universities.

#### **Salient Features**

- Special emphasis on construction materials such as foundation work, stone and brick masonry, plastering work, door and window design, roof and floors and DPC among others.
- · Exhaustive coverage of major Indian universities curriculum
- · A separate chapter on modern construction techniques and instruments used in construction work

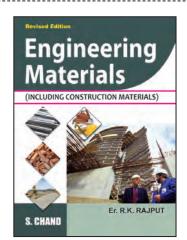
ISBN: 9789384319809 | Code: 1010000623 | Price: ₹ 365 | Pages: 384 | Size: 6.5" X 9.25"(Paperback)

Contents

1. Building Stones, 2. Ceramic Building Materials, 3. Lime, 4. Bricks, 5. Cement, 6. Timber, 7.Mortar, 8. Pozzolans, 9. Concrete, 10. Geosynthetic Materials, 11. Special Concrete, 12. Formwork Materials, 13. Ferrous Metals, 14. Steel, 15. Non-ferrous Metals, 16. Glass, 17. Paints, Varnishes and Distemper, 18. Bitumen, Tar and Asphalt, 19. Plastic, 20. Miscellaneous Materials, 21. Brick Masonry, 22. Stone Masonry, 23. Foundation Work, 24. Arches and Lintels, 25. Plastering and Pointing, 26. Door and Windows 27. Stairs and Lifts, 28. Roof and Floors, 29. DPC and Waterproofing, 30. Ordinary Building Construction Equipment's



# Engineering & Technology



#### **Engineering Materials (Including Construction Materials) 4e**

R.K. Rajput

#### **About the Book**

For close to 20 years "Engineering Materials" is a useful resource for Civil Engineering students as well as practicing Engineers. It has been divided into 22 chapters ranging from - Building stones, Bricks and Lime to Mortar, Concrete and Timber, from Metals and Alloys to Insulating materials and from lubricating materials to ceramic materials. Special emphasis has been given to construction materials which is must to know for practicing engineers.

#### **Salient Features**

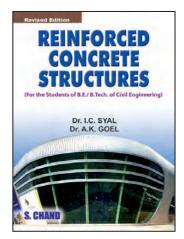
- The text tackles all major concepts of the subject in a concise but meticulous manner.
- · Close to 300 Examples, Figures and chapter-end highlights aid to the understanding of students.
- A staggering 1500+ chapter-end Theoretical Questions and Objective Type Questions as well as book-end Short-Answer questions with answers are provided for practice.

#### ISBN: 9788121919609 | Code: 1010D00210 | Price: ₹ 550 | Pages: 528 | Size: 6.75" X 9.5" (Paperback)

#### **Contents**

1. Introduction, 2. Building Stones, 3. Bricks and Other Clay Products, 4. Lime, 5. Cement, 6. Mortar, 7. Concrete, 8. Timber and Wood-based Products, 9. Metals and Alloys, 10. Paints, Varnishes, Distempers and Anti-termite Treatment, 11. Asphalt, Bitumen and Tar, 12. Asbestos, Adhesives and Abrasives, 13. Plastics and Fibres, 14. Glass, 15. Insulating Materials, 16. Fly-Ash, Gypsum and Gypsum Plaster, 17. Elastomers and Composite Materials, 18. Lubricating, Belting and Packing Materials, 19. Cutting Tool Materials, 20. Electrical Engineering Materials, 21. Material Science of Metals, 22. Ceramic Materials \* Section: Short Answer Questions \* Index

R K Rajput is former principal Punjab College of Information Technology and Thapar Polytechnic College.



#### Reinforced Concrete Structure, 4e

I C Syal & A K Goel

#### **About the Book**

"Reinforced Concrete Structures" is strictly written as per the syllabus of different technological universities for Civil Engineering. It follows latest Indian Standard Specifications and Code of Practices related to cement and concrete. Detailed analysis and design of end blocks by different methods form an important feature of the book. This book will also be useful for practicing civil engineers for the knowledge of reinforced concrete in construction industry.

#### **Salient Features**

- Special emphasis on Masonry Structures, Concrete Bridges and Design examples of Limit State Method.
- More than 700 figures, tables, examples and charts showing details of reinforcement as practiced in India have been included in the book.
- SI Units equivalents and Properties of round bars have been included at the end of the book.

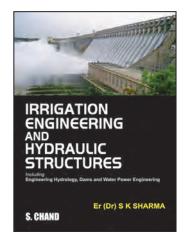
### ISBN: 9788121923538 | Code: 1010C00282 | Price: ₹ 795 | Pages: 830 | Size: 6.75" X 9.5" (Paperback)

Part-I: Materials: 1. Introduction, Part-II: Working Stress Method of Design: 2. Reinforced Concrete Beam Analysis, 3. Beam Reinforced in Tension and Compression, 4. Shear, Bond and Torsion, 5. Design of Rectangular Beams, 6. Flanged Beams, 7. Slabs, 8. Axially Loaded Columns, 9. Combined Bending and Direct Stresses, 10. Foundations, 11. Stairs, 12. Retaining Walls, 13. Domes, 14. Beams Curved in Plan, 15. Reinforced Brick Work, 16. Formwork, Part-III: Limit State Method of Design: 17. Introduction to Limit State Design, 18. Limit State of Collapse: Flexure, 19. Limit State of Collapse: Shear, 20. Limit State of Collapse: Torsion, 21. Limit State of Collapse: Compression, 22. Limit State of Serviceability, 23. Development Length and Anchorage, Part-IV: Water Storage Tanks: 24. Water Tanks, Part-V: Prestressed Concrete: 25. Prestressed Concrete, 26. Masonry Structures, 27. Concrete Bridges, 28. Design Examples on Limit State Method, 29. Yield Line Theory • References • Appendices • A: Imposed Floor Loads for Different Occupancies • B: SI Units Equivalents • C: Properties of Round Bars • D: Unit Weights of Building Materials and Stored Materials • Index

I C Syal is retired Professor and Head, Department of Civil Engineering, Punjab Engineering College, Chandigarh.

A K Goel is Professor of Civil Engineering, Faculty of Engineering & Technology, Manav Rachna International University, Faridabad.





#### Irrigation Engineering and Hydraulic Structures

S.K. Sharma

#### **About the Book**

"Irrigation Engineering and Hydraulic Structures" is a comprehensive book dealing with all the aspects of Irrigation in India starting from soil moisture to different types of irrigation systems like Sprinkler, Tubewell, Canal and Micro-Irrigation. It also focuses on Engineering Hydrology, Dams, Water Power Engineering as well as Irrigation Water Management. The book specially highlights the principles, practices and design procedures that have been widely recommended around the world.

#### **Salient Features**

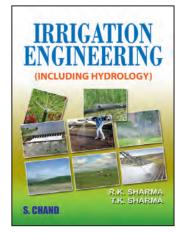
- Complete syllabi coverage of major Indian Universities, NIT's, IIT's, A.M.I.E and the like.
- Detailed designs of important hydraulic structures which are worked out with the help of illustrations.
- 1400+ chapter-end questions and references provide practice to the thorough content provided.
- · Close to 950 Illustrations, tables and in-text problems aid the understanding of concepts.

ISBN: 9789352533770 | Code: 9789352533770 | Price: ₹ 975 | Pages: 1,200 | Size: 6.75" X 9.5" (Paperback)

#### **Contents**

1. Irrigation and its Planning in India, 2. Irrigation Soils and their Fertility, 3. Principal Crops in India, 4. Soil-Water-Plant Relationships, 5. Irrigation Water - its Application and Assessment, 6. Sprinkler Irrigation, 7. Micro-irrigation (Drip/Trickle etc.), 8. Ground Water (Open Wells), 9. Tubewell Irrigation, 10. Canal Irrigation, 11. Unlined Canals – Silt Theories, 12. Unlined Canals – Their Planning and Design, 13. Lined Canals and their Design, 14. Lift Irrigation, 15. Water Logging, 16. Drains, 17. Land Reclamation, 18. River Engineering, 19. River Training Works, 20. Theories of Seepage, 21. Diversion Headworks, 22. Design of Weir/Barrage and Canal Head Regulator, 23. Canal Regulators, 24. Canal Falls, 25. Cross-drainage Works, 26. Canal Outlets, 27. Engineering Hydrology, 28. Gravity Dams, 29. Arch Dams, 30.Buttress Dams, 31. Earth and Rockfill Dams, 32. Spillways, 33. Energy Dissipaters, 34.Water Power Engineering, 35. Irrigation Water Management

**S K Sharma** is a former Professor and Head, Civil Engineering Department, PEC University, Chandigarh. He graduated from IIT Kharagpur and also did his M.Sc. (Engineering) with distinction from Punjab University and completed his Ph.D. in record time.



#### Irrigation Engineering (Including Hydrology)

R.K. Sharma & T.K. Sharma

#### **About the Book**

"Irrigation Engineering" is written for the students of Civil and Agricultural engineering of different universities. Apart from its core objective of presenting the topics of Irrigation Engineering in a very lucid manner, the book focuses on clarity of concepts related with designing of Irrigation Engineering Structures thereby making it a must read for students.

#### **Salient Features**

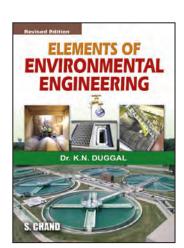
- · Follows the practices as standardised by Bureau of Indian Standards.
- Theoretical principles have been blended with field practices for better understanding of principles and practices of irrigation engineering.
- Incorporates essence of planning design and construction of Bhakra Dam, Pong Dam and Sardar Sarovar Canal systems.
- 700 figures, tables and diagrams are followed by close to 400 question for better understanding of students.

ISBN: 9788121921282 | Code: 1010B00240 | Price: ₹ 795 | Pages: 752 | Size: 6.75" X 9.5" (Paperback)

#### **Contents**

Part-I: Irrigation Principles and Practices: 1. Irrigation, 2. Irrigation Water Requirement and Crops, 3. Irrigation System, 4. Methods of Irrigation, 5. Unlined Channels, 6. Lined Canals, 7. Drainage Engineering, Part-II: River Engineering: 8. River Mechanics, 9. River Training, Part-III: Canal Structures: 10. Headworks, 11. Control Structures, 12. Cross Drainage Works, 13. Bridges and Culverts, 14. Canal Outlets, Part-IV: Hydrology: 15. Hydrology, Part-V: Dam Engineering: 16. Reservoirs and Dam Planning, 17. Earth and Rockfill Dams, 18. Irrigation Water Requirement and Crops, 19. Arch Buttress Dams, 20. Discharge Facilities, Part-VI: Water Power Engineering: 21. Water Power Engineering, Part-VII: Irrigation Water Management: Irrigation Water Management • Appendix-I: Dam Safety • Appendix-II: Some Important Dams in India • Appendix-III: Some Typical Design Problems • Appendix-IV: Objective Type Question • Bibliography

**R K Sharma** is Consultant, Water Resources.



#### Elements of Environmental Engineering, 3e

K.N. Duggal

#### **About the Book**

Primarily written to serve as a textbook for Civil Engineering, "Elements of Environmental Engineering" also serves the students of Chemical Engineering, AMIE, UPSC and Diploma courses. It brings together the three principal areas of environmental engineering - Water, Air and Earth pollution. The important principles and practices of Sanitary Engineering have been exhaustively covered so that it may be easy for the students preparing for various examinations. A book which has seen, foreseen and incorporated changes in the subject for more than 50 years, it continues to be one of the most sought after texts by the students.

#### **Salient Features**

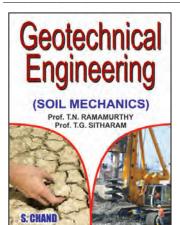
- · Succinct treatment of the subject makes an otherwise difficult subject easier to understand.
- Equivalent MKS units have been given in parenthesis and illustrated through solved examples to make reader more convenient with their applications.
- 300+ figures and tables aid to the understanding of and more than 350 chapter end questions aid to the practice
  of students.

ISBN: 9788121915472 | Code: 1010D00189 | Price: ₹ 495 | Pages: 472 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

Part-I: Water Supply: 1. Introduction, 2. Quantity of Water, 3. Sources of Water Supply, 4. Intake Works and Transportation of Water, 5. Pumps and Pumping, 6. Quality of Water, 7. Treatment of Water, 8. Distribution System, Part-II: Sewerage and Sewage Treatment: 1. Introduction, 2. Underground Drainage and Sewerage, 3. Surface and Storm Water Drainage, 4. Sewer Appurtenance and Sewage Pumps, 5. Microbiology of Sewage, 6. Sewage Disposal and Treatment, 7. Sewage Treatment Methods, Part-III: 1. Water Supply and Drainage of Buildings, Part-IV: 1. Environmental Sanitation, A. Refuse and Solid Waste Management, B. Ventilation and Air Conditioning, C. Water and Industrial Pollution, D. Air Pollution, E. Noise Pollution, F. Soil and Agricultural Pollution, G. Thermal Pollution, H. Radioactive Pollution, I. Malaria Incidental to Engineering, J. Bioenergy and Biogas Generation • Bibliography • Appendix-I: Metric System of Weights and Measurement • Appendix-II: Conversion Factors Used • Appendix-III: Origin, Characteristics, Effects and Treatment of Major Industrial Wastes • Index

K N Duggal is Ph.D., C. Eng. (I) FIE.



### Geotechnical Engineering (Soil Mechanics) 4e

T.N. Ramamurthy & T.G. Sitharam

#### **About the Book**

Primarily written for Civil Engineering, "Geotechnical Engineering" is also written at a level suitable for the first course in Geotechnical Engineering. It highlights the basic principles of soil mechanics along with application to many problems in the subject. The subject is explained in a very simple, clear and logical manner.

#### **Salient Features**

- Standard notations have been used throughout the book and content has been based on SI units.
- The "Introduction" chapter lays out all basic definitions required in the subject of Soil Mechanics.
- Additional questions for practice and 2 Appendixes (IS Sieves and Solution to Terzaghi's One Dimensional Consolidation Equation) are provided at the end of the book apart from close to 450 figures, tables, problems/ examples and questions throughout the text to help students in developing analytical skill needed for problem solving.

ISBN: 9788121924573 | Code: 1010C00301 | Price: ₹ 375 | Pages: 304 | Size: 6.5" X 9.25" (Paperback)

#### Contents

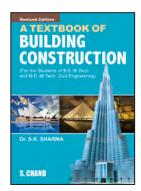
1. Introduction, 2. Basic Terminology and Interrelations, 3. Index Properties of Soil, 4. Soil Classification Systems, 5. Soil Formation and Soil Structure, 6. Soil Water and Effective Stress, 7. Permeability, 8. Seepage Analysis, 9. Stress Distribution in Soil Mass, 10. Compaction, 11. Consolidation, 12. Shear Strength of Soils, 13. Stability of Slopes, A. Additional Questions, B. Appendix-1: IS Sieves, C. Appendix-2: Solution to Terzaghi's One Dimensional Consolidation Equation \*References \* Index \* Answers

T N Ramamurthy is Professor, Department of Civil Engineering, RV College of Engineering, Bangalore.

T G Sitharam is Professor, Department of Civil Engineering, Indian Institute of Science (IISc) Bangalore.

### Civil Engineering





## A Textbook of Building Construction

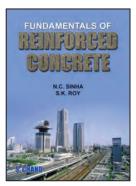
S.K. Sharma

ISBN: 9788121904797 Code: 1010C00034 Price: ₹ 625 | Pages: 648 Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Introduction, 2. Design Loads, 3. Soils and their Investigation, 4. Foundations, 5. Brick Masonry, 6. Stone Masonry, 7. Hollow Block Masonry, 8. Partition and Cavity Walls, 9. Arches and Lintels, 10. Damp Prevention, 11. Wood Work Joints, Fastenings and Tools, 12. Doors and Windows, 13. Floors, 14. Stairs, 15. Lifts and Escalators, 16. Roofs, 17. Roof Coverings, 18. Steel Work, 19. Concrete Construction, 20. Prefabricated (Precast) Construction, 21. Formwork, 22. Plastering and Pointing, 23. Painting, Distempering and White Washing, 24. Thermal Insulation, 25. Ventilation, 26. Air-Conditioning of Buildings, 27. Acoustics, Sound Insulation and Noise Control, 28. Shoring, Underpinning and Scaffolding, 29. Fire and its Protection, 30. Earthquake Protection • Index

**S K Sharma** is Former Professor and Head of Civil Engineering, PEC University of Technology, Chandigarh.



#### Fundamentals of Reinforced Concrete

N.C. Sinha & S.K. Roy

ISBN: 9788121901277 Code: 1010A00041

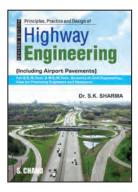
Price: ₹ 1199 | Pages: 1,168 Size: 6.75" X 9.5" (Paperback)

#### **Contents**

1. Materials, Properties, Manufacture and Specifications, 2. Conventional Theory of Reinforced Concrete, 3. Shear Stress—Diagonal Tension, Bond and Anchorage, 4. Limit State Method of Analysis and Design, 5. Design of One Way Slabs and Beams Working Stress and Limit State Methods, 6. Axially Loaded Columns - Working Stress and Limit State Methods, 7. Continuous Beams and One Way Slabs - Working Stress and Limit State Methods, 8. Two Way Slabs and Flat Slabs - Working Stress and Limit State Methods, 9. Foundation and Footings — Working Stress and Limit State Methods, 10. Retaining Wall, Working Stress and Limit State Methods, 11. Staircases, 12. Combined Direct and Bending Stress Working Stress and Limit State Methods, 13. Building Frames. Seismic Analysis, 14. Torsion in Reinforced Concrete Working Stress and Limit State Methods, 15. Yield Line Theory and Strip Method of Analysis of Slabs, 16. Domes and Water Tanks, 17. Deflections, Limit Method of Analysis and Cracking of Concrete, 18. Detailing for Seismic Resistant Building, 19. Deep Beams, 20. Distribution of Concentrated Loads, Bridges, Box Culverts and Marine Structures

**N .C. Sinha** is M.S. (Stanford), Ph.D. (Texas), F.I.E., (India) and a Chartered Engineer. He is former Professor and Head Department of Civil Engineering Bengal Engineering College, Howrah.

**S. K. Roy** is M.E., (N.B.U.) Ph.D. (Indian Institute of Technology Kharagpur) and former Assistant Professor Department of Civil Engineering, Bengal Engineering College.



# Principles, Practice and Design of Highway Engineering, 3e

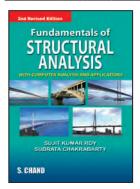
S K Sharma

ISBN: 9788121901314 Code: 1010D00104 Price: ₹ 895 | Pages: 928 Size: 6.75" X 9.5" (Paperback)

#### Content

Part-I: 1. Introduction, 2. Highway Planning and Administration, 3. Highway Economics and Financing, 4. Traffic Engineering, Part-II: 5. Highway Location and Project Preparation, 6. Hill Roads, 7. Drainage and Drainage Structures, 8. Geometric Design of Highways, Part-III: 9. Soil Classification, 10. Earthwork, Part-IV: 11. Low-Cost Roads, 12. Soil Stabilized Roads, 13. Macadam Roads, 14. Bituminous Materials, 15. Bituminous Surface Treatments, 16. Carpet Coat, Road-mix and Intermediate type Bituminous Plantmix Surfaces, 17. High-type Bituminous Pavements, Base Courses & their Design, 18. Portland Cement Concrete Pavements and Base Courses, Part-V: 19. General Principles of Pavements Design, 20. Flexible Pavement Design Methods, 21. Rigid Pavement Design Methods, Part-VI: 22. Pavement Distress, 23. Pavement Evaluation and Strengthening, 24. Highway Maintenance \* Bibliography \* Index

**S K Sharma** is Former Professor and Head of Civil Engineering, PEC University of Technology, Chandigarh.



## Fundamentals of Structural Analysis, 2e

Sujit Kumar Roy & Subrata Chakrabarty

ISBN: 9788121921954 Code: 1010B00245

Price: ₹ 850 | Pages: 1,024 Size: 6.75" X 9.5" (Paperback)

#### **Contents**

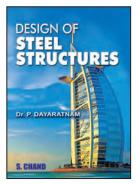
• Basis 1. Basis of Structural Analysis, 2. External Equilibrium of Structure, 3. Truss Analysis, 4. Axial Force, Shear and Moment Diagrams – Beam, 5. Thrust, Shear and Moment Diagrams – Frames, 6. Cable, Suspension Bridge and Three Hinged Arch, 7. Force Displacement Relations – Geometric Methods, 8. Force Displacement Relations - Energy Method, 9. Influence Lines for Statically Determinate Structures, 10. Classical Compatibility(Force) Methodof Analysis, 11. Classical Equilibrium (Displacement) Method of Analysis, 12. Two Hinged Arch, 13. Column Analogy, 14. Influence Lines for Statically Indeterminate Structures, 15. Approximate Methods of Analysis of Indeterminate Structures, 16. Matrix Method of Structural Analysis, 17. Dynamic Analysis of Structure, 18. Plastic Analysis of Structures \* Answers \* Landmarks in the History of Structural Engineering \* Bibliography \* Index

**Sujit Kumar Roy** is Ph.D. (IIT, Kharagpur), MIE (India) Assistant Professor of Civil Engineering.

Subrata Chakrabarty is Ph.D. (IIT, Kharagpur) Bengal Engineering College.



## Engineering & Technology



## Design of Steel Structures, 3e

P Dayaratnam

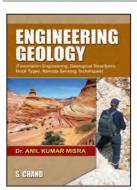
ISBN: 9788121923200 Code: 1010A00272

Price: ₹ 895 | Pages: 880 Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Properties of Structural Steel, 2. Welding, Riveting and Bolting, 3. Tension Members, 4. Compression Members, 5. Simple Beams, 6. Plate Girders, 7. Beam Columns, 8. Gantry Girders, 9. Column Caps and Base Plates, 10. Loads, 11. Wind Loads on Industrial Buildings, 12. Braced Industrial Buildings, 13. Unbraced Industrial Frames (Gable Frames), 14. Towers, 15. Introduction to Plastic Design, 16. Design of Water Tanks, 17. Bridges \* Appendices: A. Properties of Rolled Beams, B. Bending Moment and Deflection Coefficients, C. Design Aids to Roof Trusses, D. Member Notation: Guide Lines to Member Design, E. Objective Questions \* Index

**P Dayaratnam** is PhD (Colorado) Ex Dean of R&D, IIT Kanpur, Ex-Vice Chancellor JNTU Hyderabad.



### Engineering Geology

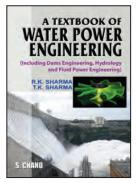
Anil Kumar Misra

ISBN: 9788121943222 Code: 1010000613 Price: ₹ 295 | Pages: 264 Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Introduction, 2. General Geology and Processes, 3. Geodynamics, 4. Structural Geology, 5. Rocks of the Earth, 6. Building Construction Materials, 7. Mineralogy and Crystallography, 8. Indian Stratigraphy, 9. Hydrogeology, 10. Remote Sensing and GIS, 11. Dams and Reservoirs, 12. Tunnels, 13. Roads, Highways and Bridges, 14. Soil and Geotechnical Studies, 15. Geophysical Investigations, 16. Improvement of Foundation Rocks and Soil, 17. Landslides, Slopes and Embankments, 18. Environmental Geology • References and Bibliography

**Anil Kumar Misra,** Ph. D., is Associate Professor in Department of Civil and Environmental Engineering at The NorthCap University (formerly ITM University Gurugram), Gurugram, Haryana.



## A Textbook of Water Power Engineering,

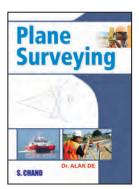
R.K. Sharma & T.K. Sharma

ISBN: 9788121922302 Code: 1010B00237 Price: ₹ 515 | Pages: 496 Size: 6.5" X 9.25" (Paperback)

#### **Contents**

Part-I: Water Power Development: 1. Energy, 2. Environment & Water Power Development, 3. Planning for Water Power Development, 4. Water Power Development, 5. Storage Power Development, 6. Run-of-River Power Development, 7. Pumped Storage Power Development, 8. Small Hydro Power Development, 9. Hydro Power Plants, 10. Hydraulic Turbines, 11. Hydraulic Valves and Gates, 12. Water Conductor System, 13. Penstocks and Pressure Shafts, 14. Hydraulic Transients and Surge Tanks, 15. Transmission Lines, 16. Hydraulic Tunnels, Part-II: Dams Engineering: 17. Reservoirs and Dams, 18. Earth and Rockfill Dams, 19. Gravity Dams, 20. Arch and Buttress Dams, Part-III: Hydrology: 21. Precipitation Measurement and Analysis, 22. Runoff and Flood Estimation, Part-IV: Fluid Power Engineering: 23. Centrifugal Pumps, 24. Reciprocating Pumps, 25. Miscellaneous Hydraulic Machines • Appendices: I. Determination of Number and Type of Units, II. Accelerated Hydro Power Development – A Case Study by E.R.K. Sharma, III. Design of Surge Shaft, IV. Objective Type Questions • Bibliography

R K Sharma is Consultant Water Resources & T K Sharma is B.E.



#### Plane Surveying

Alak De

ISBN: 9788121917803 Code: 1010A00200 Price: ₹ 650 | Pages: 680 Size: 6.75" X 9.5" (Paperback)

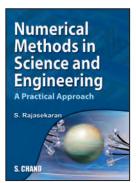
#### **Contents**

1. Introduction, 2. Chain Surveying, 3. Traversing with Chain and Compass, 4. Fundamentals of Optics, 5. Theodolite Traversing, 6. Plane Table Surveying, 7. Levelling, 8. Contouring, 9. Tacheometry, 10. Areas, 11. Earthwork, 12. Setting out Works, 13. Setting out of Curves, 14. Instruments, 15. Underground Surveying, 16. Hydrographic Surveying • References • Index

**Alak De** is Member National Safety Council, Professor of Civil Engineering and Head of Environmental Engineering Division, Jadavpur University.

### Civil Engineering





### Numerical Methods in Science and Engineering

A Practical Approach,

2e

S Rajasekaran

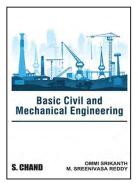
ISBN: 9788121923125 Code: 1010000269 Price: ₹ 595 | Pages: 688

Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Errors and Approximations in Numerical Computations, 2. Matrices and Determinants, 3. Linear System of Equations (Direct Methods), 4. Iterative Methods for Solving Linear Equation, 5. Storage Schemes and Solutions of Large System of Linear Equations, 6. Solution Techniques for Eigenvalue Problems, 7. Solution of Non-Linear Equation, 8. Solution of Non-Linear System of Equations, 9. Interpolation and Curve Fitting, 10. Numerical Integration, 11. The Approximation for the Solution of Ordinary First Order Differential Equations, 12. Boundary Value Problems Region Method (Finite Difference Approach) • References • Appendix • Index

**S Rajasekaran** is Ph.D. (Canada) D.Sc. (Civil Engg.), DSS, FIE, FIV, M.ASCE, MCSI, MISTE, FNAE, Professor of Infrastructural Engineering, Department of Civil Engineering, PSG College of Technology, Coimbatore.



#### Basic Civil and Mechanical Engineering

Ommi Srikanth & M. Sreenivasa Reddy

ISBN: 9789358708622 Price: ₹ 325 | Pages: 360 Size: 6.5" X 9.25" (Paperback)

#### Contents

PART A: Basic Civil Engineering

1. Basics of Civil Engineering, 2. Surveying, 3. Transportation Engineering

PART B: Mechanical Engineering

1. Introduction to Mechanical Engineering, 2. Manufacturing Processes, 3. Power Plant

Ommi Srikanth B.E., M.Tech., PhD. Professor, Mechanical Engineering Department Dhanekula Institute of Engineering & Technology Vijayawada, Andhra Pradesh

M. Sreenivasa Reddy B.E., M.Tech., PhD. Principal, Aditya Engineering College Surampalem, Andhra Pradesh



### A Textbook of Estimating and Costing (Civil) 2e

D.D. Kohli & R.C. Kohli

ISBN: 9788121903325 Code: 1010B00112 Price: ₹ 525 | Pages: 504 Size: 6.75" X 9.5" (Paperback)

#### **Contents**

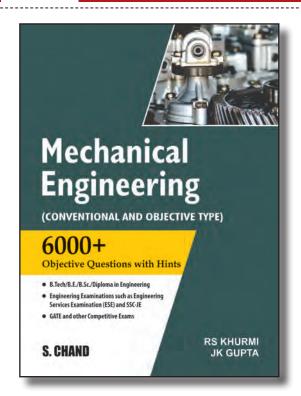
Part-I: Estimating & Costing: 1. Introduction, 2. Methods Measurement, 3. Estimates, 4. Detailed Estimates, 5. Joinery, 6. Arches, 7. Trusses, 8. Specifications, 9. Analysis of Rates, 10. Carriage, 11. RCC Works, 12. Earth Work, 13. Services, 14. Roads, 15. Retaining Walls, 16. Bridge and Culverts, 17. Valuation • Appendix: Tables and Useful data for Civil Engineers, Part-II: Building Bye-Laws: 18. Building Bye-Laws, Part-III: Accounts: 19. Public Works Accounts, 20. Organisation at P.W.D, 21. Works, 22. Contracts and Tenders, 23. Stores, 24. Cash, 25. Miscellaneous, 26. Solved, University Question Papers

D.D. Kohli is formerly of PWD (B & R) and Thapar Polytechnic, Patiala.

**R.C. Kohli** is Former HOD, Thapar Polytechnic College, Patiala. Currently, he is HOD, Civil, E–Max Group of Institutes (Polytechnic), Ambala.







# Mechanical Engineering (Conventional and Objective Type)

R.S. Khurmi & J.K. Gupta

#### **About the Book**

For more than 30 years "Mechanical Engineering: Conventional and Objective Type" continues to be a comprehensive text aided by a collection of multiple-choice questions specifically for aspirants of various competitive examinations such as GATE, UPSC, IAS, IES and SSC-JE among others as well as students who are preparing for university examinations. The new edition contains 17 chapters where every important concept of Mechanical Engineering is fairly treated. On the other hand, the questions provided in this book have been selected from various potent resources to provide the students with an idea of how the questions are set and what type of questions to expect on the final day.

#### **Salient Features**

- Divided in 17 chapters containing more than 6000+ questions with hints provide rich practice
- Numerous graphs and figures providing ample support to the theory explained

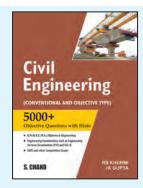
ISBN: 9789355014450 | Price: ₹ 799 | Pages: 680 | Size: 6.75" X 9.5" (Paperback)

#### **Contents**

- 1. Engineering Mechanics
- 2. Strength of Materials
- 3. Hydraulics and Fluid Mechanics
- 4. Hydraulic Machines
- 5. Thermodynamics
- 6. Steam Boilers and Engines
- 7. Steam Nozzles and Turbines
- 8. I.C. Engines and Nuclear Power Plants
- 9. Compressors, Gas Dynamics and Gas Turbines

- 10. Heat Transfer, Refrigeration and Air Conditioning
- 11. Theory of Machines
- 12. Machine Design
- 13. Engineering Materials
- 14. Workshop Technology
- 15. Production Engineering
- 16. Industrial Engineering and Production Management
- 17. Automobile Engineering
- Index

Objective Series for B.Tech/
B.E./B.Sc./
ESE & GATE
Examinations



ISBN: 9789355014443 ₹ 699

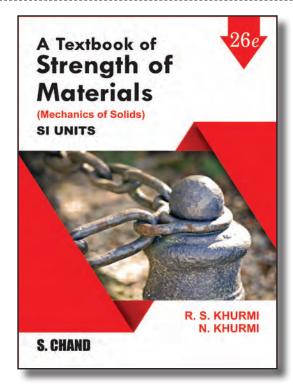


ISBN: 9789355014467 ₹ 825



ISBN: 9788121925716 ₹ 699





## A Textbook of Strength of Materials, 26e (Mechanics of Solids) SI Units

R.S. Khurmi & N. Khurmi

Multicolour Edition

#### **About the Book**

"Strength of Materials: Mechanics of Solids in SI Units" is an all-inclusive text for students as it takes a detailed look at all concepts of the subject. Distributed evenly in 35 chapters, important focusses are laid on stresses, strains, inertia, force, beams, joints and shells amongst others.

Each chapter contains numerous solved examples supported by exercises and chapter-end questions which aid to the understanding of the concepts explained. A book which has seen, foreseen and incorporated changes in the subject for close to 50 years, it continues to be one of the most sought after texts by the students for all aspects of the subject.

#### **Salient Features**

- 35 chapters provide an in-depth coverage of every important concept in the subject.
- More than 1000 examples, figures and tables aid to the concepts explained.
- More than 600 in-text exercise questions and chapter-end questions add to the practice of the students.
- FIVE NEW Chapters on "Unsymmetrical Bending and Shear Centre", "Mechanical Properties of Materials (Stress-Strain Diagram)", "Torsion of Circular Shafts", "Theories of Failure" and "Testing of Materials"
- Free On the Website: 9 Chapters on "Analysis of Perfect Frames (Graphical Method)", "Dams and Retaining Walls", "Deflection by Conjugate Beam Method", "Moment Distribution Method", "Torsion of Circular Shafts", "Riveted Joints", "Welded Joints", "Introduction to Reinforced Concrete" and "Mechanical Properties and Testing of Materials (Stress-Strain Diagram)"

ISBN: 9789352833979 | Price: ₹ 1050 | Pages: 832 | Size: 6.5" X 9.25" (Paperback)

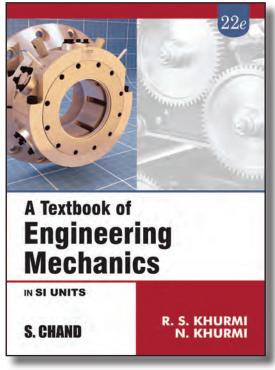
- 1. Introduction
- 2. Mechanical Properties of Materials (Stress-Strain Diagram)
- 3. Simple Stresses and Strains
- 4. Stresses and Strains in Bars of Varying Sections
- 5. Stresses and Strains in Statically Indeterminate Structures
- 6. Thermal Stresses and Strains
- 7. Elastic Constants
- 8. Principal Stresses and Strains
- 9. Strain Energy and Impact Loading
- 10. Centre of Gravity
- 11. Moment of Inertia
- Analysis of Perfect Frames (Analytical Method)

- 13. Bending Moment and Shear Force
- 14. Bending Stresses in Simple Beams
- 15. Bending Stresses in Composite Beams
- 16. Shearing Stresses in Beams
- 17. Direct and Bending Stresses
- 18. Deflection of Beams
- 19. Deflection of Cantilevers
- 20. Deflection by Moment Area Method
- 21. Torsion of Circular Shafts
- 22. Springs
- 23. Thin Cylindrical and Spherical Shells
- 24. Thick Cylindrical and Spherical Shells
- 25. Columns and Struts
- 26. Propped Cantilevers and Beams

- 27. Fixed Beams
- 28. Theorem of Three Moments
- 29. Strain Energy & Deflection
  Due to Bending & Shear
  (and Castigliano's Theorem)
- 30. Bending of Curved Bars
- 31. Theories of Failure
- 32. Testing of Materials
- 33. Product of Inertia
- 34. Unsymmetrical Bending and Shear Centre
- 35. Stresses due to Rotation
- Appendix
- Index



# Engineering & Technology



## A Textbook of Engineering Mechanics, 22e

R.S. Khurmi & N. Khurmi



#### **About the Book**

"A Textbook of Engineering Mechanics" is a must-buy for all students of engineering as it is a lucidly written textbook on the subject with crisp conceptual explanations aided with simple to understand examples.

Important concepts such as Moments and their applications, Inertia, Motion (Laws, Harmony and Connected Bodies), Kinetics of Motion of Rotation as well as Work, Power and Energy are explained with ease for the learner to really grasp the subject in its entirety.

A book which has seen, foreseen and incorporated changes in the subject for 50 years, it continues to be one of the most sought after texts by the students.

#### **Salient Features**

- 38 chapters evenly explain all major theories of the subject.
- SEVEN NEW Chapters on "Pappus Guldinus Theorem", "Product of Inertia", "Product of Inertia", "Vibrations", "Mass Moment of Inertia", "Work-Energy Method" and "Forces in Space (In Vector Form)"
- More than 1000 figures and examples aid to the concepts explained.
- More than 750 in-text exercise and chapter-end questions for practice.
- Free On the Website: 6 Chapters on "Analysis of Perfect Frames (Graphical Method)", "Equilibrium of Strings", "Balancing of Rotating Masses", "Motion of Vehicles", "Hydrostatics" and "Equilibrium of Floating Bodies".

ISBN: 9789352833962 | Price: ₹ 895 | Pages: 784 | Size: 6.5" X 9.25" (Paperback)

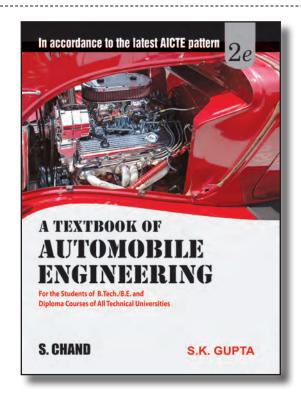
- 1. Introduction
- 2. Forces
- 3. Moments
- 4. Parallel Forces and Couples
- 5. Equilibrium of Forces
- 6. Centre of Gravity
- 7. Moment of Inertia
- 8. Principles of Friction
- 9. Applications of Friction
- 10. Principles of Lifting Machines
- 11. Simple Lifting Machines
- 12. Support Reactions
- 13. Analysis of Perfect Frames (Analytical Method)
- 14. Virtual Work

- 15. Linear Motion
- 16. Motion Under Variable Acceleration
- 17. Relative Velocity
- 18. Projectile Motion
- 19. Motion of Rotation
- 20. Combined Motion of Rotation and Translation
- 21. Simple Harmonic Motion
- 22. Laws of Motion
- 23. Motion of Connected Bodies
- 24. Helical Springs and Pendulums
- 25. Collision of Elastic Bodies
- 26. Motion Along a Circular Path
- 27. Work, Power and Energy
- 28. Mass Moment of Inertia

- 29. Kinetics of Motion of Rotation
- 30. Transmission of Power by Belts and Ropes
- 31. Transmission of Power by Gear Trains
- 32. Work-Energy Method
- 33. Forces in Space (In Vector Form)
- 34. Pappus—Guldinus Theorems
- 35. Product of Inertia
- 36. Rectangular and Cylindrical Coordinate System in Dynamics
- 37. Vibrations
- 38. Forces in Space (In Vector Form)
- Appendix
- Index

## Mechanical Engineering





### A Textbook of Automobile Engineering, 2e

Er. S.K. Gupta

#### **About the Book**

A Textbook of Automobile Engineering is a comprehensive treatise which provides clear explanation of vehicle components and basic working principles of systems with simple, unique and easy-to-understand illustrations. The textbook also describes the latest and upcoming technologies and developments in automobiles. This edition has been completely updated covering the complete syllabi of most Indian Universities with the aim to be useful for both the students and faculty members. The textbook will also be a valuable source of information and reference for vocational courses, competitive exams, interviews and working professionals.

#### **Prominent Features:**

- Inclusion of four new chapters on Alternate Fuels, Hybrid, Electric and Fuel Cell vehicles, Advanced Vehicle Technologies and Regulation and Standards.
- 1000+ Examples, Figures and Tables for better understanding of concepts.
- 1000+ Exercises (unsolved numerical problems) with Answers, Theoretical Questions and Objective Type Questions with Answers from latest examination papers of various universities for rigorous practice.

ISBN: 9789352838165 | Price: ₹ 825 | Pages: 944 | Size: 6.75" X 9.5" (Paperback)

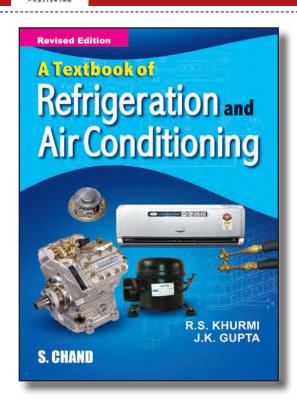
#### Contents

- 1. Introduction
- 2. Performance of Automobiles
- 3. Suspension System
- 4. Tyre and Wheel
- 5. Steering System
- 6. Braking System
- 7. Electrical fundamentals
- 8. Battery
- 9. Charging System
- 10. Starting System
- 11. Lighting System and Accessories
- 12. Air-conditioning, Heating and Ventilation Systems

- 13. I.C. Engines (Fundamentals and Components)
- 14. Combustion and Combustion Chambers
- 15. Working and Testing of I.C. Engines
- 16. Cooling System
- 17. Lubrication System
- 18. Fuel Supply System in Petrol Engines
- 19. Fuel Systems in Diesel Engines
- 20. Air Intake and Exhaust System
- 21. Air Pollution and its Control (Emission Control)
- 22. Ignition System

- 23. Clutches
- 24. Manual Transmission
- 25. Automatic Transmission
- 26. Drive Line System
- 27. Common Tools and Measuring Instruments
- 28. Maintenance System
- 29. Alternate Fuels
- 30. Hybrid, Electric and Fuel Cell Vehicles
- 31. Advanced Vehicle Technologies
- 32. Regulation and Standards

Er. SK Gupta is a post-graduate engineer and has good experience in technical education.



# A Textbook of Refrigeration and Air Conditioning, 5e

R.S. Khurmi & J.K. Gupta

#### **About the Book**

"A Textbook of Refrigeration and Air Conditioning" is an aptly written textbooks for the students of Mechanical Engineering while also a must-read for anyone with an interest in the subject.

For 30 years, topics such as Air Refrigeration Cycles and Systems, Vapour Compression Refrigeration Systems (Simple and Compound), Refrigerants (incl. Compressors), Psychrometry and Applications of Refrigeration and Air Conditioning have been included and updated for students to conceptualise the subject in a complete manner. The chapters consist of various exercises, examples, and multiple illustrations that aid in understanding the subject better.



#### **Salient Features**

- Every concept has been treated individually and then linked within the chapter to provide not only information but also insight.
- Close to 800 examples, figures, tables and pictorial depictions aid to the concepts explained.
- More than 500 chapter-end (objective and subjective) and exercise questions add to the practice of the students.

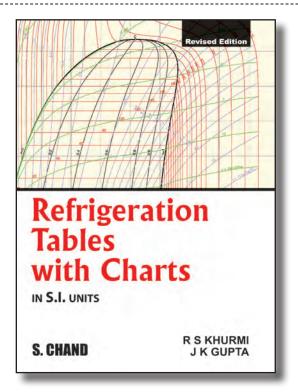
ISBN: 9788121927819 | Code: 4010B00326 | Price: ₹ 895 | Pages: 768 | Size: 6.5" X 9.25" (Paperback)

- 1. Introduction
- 2. Air Refrigeration Cycles
- 3. Air Refrigeration Systems
- 4. Simple Vapour Compression Refrigeration Systems
- 5. Compound Vapour Compression Refrigeration Systems
- 6. Multiple Evaporator and Compressor Systems
- 7. Vapour Absorption Refrigeration Systems
- 8. Refrigerants
- 9. Refrigerant Compressors
- 10. Condensers
- 11. Evaporators
- 12. Expansion Devices

- 13. Food Preservation
- 14. Low Temperature Refrigeration (Cryogenics)
- 15. Steam Jet Refrigeration System
- 16. Psychrometry
- 17. Comfort Conditions
- 18. Air Conditioning Systems
- 19. Cooling Load Estimation
- 20. Ducts
- 21. Fans
- 22. Applications of Refrigeration and Air Conditioning
- Index

## Mechanical Engineering





### **Refrigeration Tables with Chart**

R.S. Khurmi & J.K. Gupta

#### **About the Book**

"Refrigeration Tables with Charts" is for undergraduate students of Mechanical and Electrical Engineering. The book comprises several tables and charts containing the properties of refrigerants, and various other concepts related to refrigeration.

#### **Salient Features**

- The book includes psychometric chart, a friction chart for circular duct, a comfort chart for still air, and a moody chart showing friction factors for fluid flow in circular pipes or ducts
- This book is essential for students preparing for competitive examinations.

ISBN: 9788121928298 | Code: 4010C00341 | Price: ₹ 150 | Pages: 48 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

#### **Tables**

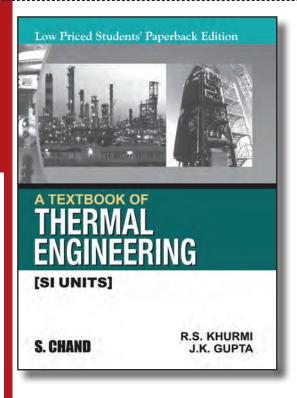
- Dry Saturated Steam (Pressure based)
- 2. Dry Saturated Steam (Temperature based)
- 3. Saturated Trichloro-Monofluoro-Methane (CCI<sub>2</sub>F), R-11
- 4. Saturated Dichloro-Difluoro-Methane (CCl<sub>2</sub>F<sub>2</sub>), R-12
- 5. Saturated Monochloro-Difluoro-Methane (CHCIF<sub>2</sub>), R-22
- 6. Saturated Methyl Chloride (CH<sub>3</sub>Cl), R-40
- 7. Saturated Dichloro-Trifluoro-Ethane (CF,CHCl,), R-113
- 8. Saturated Tetrafluoro-Ethane (CF<sub>3</sub>CH<sub>2</sub>F), R-114
- 9. Saturated Dichloro-Trifluoro-Ethane (CF<sub>2</sub>CHCI<sub>2</sub>), R-123
- 10. Saturated Tetrafluoro-Ethane (CF<sub>3</sub>CH<sub>2</sub>F), R-134

- 11. Saturated Ammonia (NH<sub>2</sub>), R-717
- 12. Saturated Carbon-Dioxide (CO<sub>2</sub>), R-744
- 13. Saturated Sulphur-Dioxide (S0<sub>2</sub>), R-764
- 14. Psychrometric Properties of Air
- 15. Important Properties of Commonly used Refrigerants
- Recommended Inside Design Conditions for Summer Comfort Cooling
- 17. Outside Summer Design Conditions for Important Cities in India
- Recommended Storage Conditions of Perishable Products

#### Charts

- 1. Mollier Diagram
- Pressure-Enthalpy (p-h) Chart for Dichloro-Difluoro-Methane (CCl<sub>2</sub>F<sub>2</sub>), R-12

- 3. Pressure-Enthalpy (*p-h*) Chart for Monochloro-Difluoro-Methane (CHCIF<sub>2</sub>), R-22
- Pressure-Enthalpy (p-h) Chart for Dichloro-Trifluoro-Ethane (CF<sub>3</sub>CHCl<sub>2</sub>), R-123
- Pressure-Enthalpy (p-h) Chart for Tetrafluoro-Ethane (CF<sub>3</sub>CH<sub>2</sub>F), R-134(a)
- 6. Pressure Enthalpy (*p-h*) Chart for Carbon-Dioxide (CO<sub>2</sub>), R-744
- 7. Pressure-Enthalpy (*p-h*) Chart for Ammonia (NH<sub>2</sub>), R-717
- 8. Psychrometric Chart
- Comfort Chart for Still Air (Air Velocities from 5 to 8 m/min)
- 10. Friction Chart for Circular Ducts
- Moody Chart Showing Friction Factors for Fluid Flow in Circular Pipes or Ducts



### A Textbook of Thermal Engineering, (LPSPE)

R.S. Khurmi & J.K. Gupta

#### About the Book

"A Textbook of Thermal Engineering" encompasses all theories of the subject thereby making it a must-read for all students of Mechanical Engineering. Topics such as General Thermodynamic Relations and Variable Specific Heat as well as Turbines (M-pulse, Reaction) and Air Compressors have been dealt in detail.

In addition to the exhaustive topical coverage, numerous solved examples and chapter-end exercises and questions have been added to make the student understand all aspects of concepts explained. A book which has seen, foreseen and incorporated changes in the subject for close to 40 years, it continues to be one of the most sought after texts by the students.

#### Salient Features

- Divided in 40 chapters, the text amply explains every concept of the subject.
- · Close to 850 examples, figures and tables aid to the concepts explained.
- More than 1000 chapter-end questions (objective and subjective) and exercises add to the practice of the students.

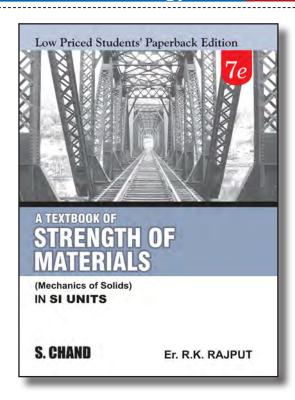
ISBN: 9789355010544 | Price: ₹ 595 | Pages: 900 | Size: 6.5" X 9.25" (Paperback)

- 1. Introduction
- 2. Properties of Perfect Gases
- 3. Thermodynamic Processes of Perfect Gases
- 4. Entropy of Perfect Gases
- 5. Kinetic Theory of Gases
- 6. Thermodynamic Air Cycles
- 7. Formation and Properties of Steam
- 8. Entropy of Steam
- 9. Thermodynamic Processes of Vapour
- 10. Thermodynamic Vapour Cycles
- 11. Fuels
- 12. Combustion of Fuels
- 13. Steam Boilers
- 14. Boiler Mountings and Accessories

- 15. Performance of Steam Boilers
- 16. Boiler Draught
- 17. Simple Steam Engines
- 18. Compound Steam Engines
- 19. Performance of Steam Engines
- 20. Steam Condensers
- 21. Steam Nozzles
- 22. M-pulse Turbines
- 23. Reaction Turbines
- 24. Performance of Steam Turbines
- 25. Modern Steam Turbines
- 26. Internal Combustion Engines
- 27. Testing of Internal Combustion Engines
- 28. Reciprocating Air Compressors

- 29. Rotary Air Compressors
- 30. Performance of Air Compressors
- 31. Air Motors
- 32. Gas Turbines
- 33. Performance of Gas Turbines
- 34. Introduction to Heat Transfer
- 35. Air Refrigeration Cycles
- 36. Vapour Compression Refrigeration System
- 37. Psychometry
- 38. Air Conditioning Systems
- 39. General Thermodynamic Relations
- 40. Variable Specific Heat
- Index

## Mechanical Engineering



## A Textbook of Strength of Materials, 7e (Mechanics of Solids) SI Units (LPSPE)

R.K. Rajput

#### **About the Book**

A comprehensive and lucidly written book, "Strength of Materials" captures the syllabus of most major Indian Universities and competitive examinations as well. The book discusses everything under solids and its mechanics (such as providing different aspects of stresses) and provides the reader with a deeper interest in the subject – all within aptly formed chapters. It also contains typical examples (useful for students appearing in competitive examinations in particular and other students in general), highlights, objective type questions and a large number of unsolved examples for a complete grasp of the subject.

#### **Salient Features**

- 21 succinctly written chapters which encompass all basic concepts along with 11 Material Testing Experiments.
- More than 1850 examples, figures, tables and chapter-end highlights aid to the concepts explained.
- Close to 800 chapter-end questions, University Questions, GATE & UPSC Examination Questions and 11 Material Testing Experiments (with precautions) for practice.
- Free On the Website: Chapter on "Riveted and Welded Joints".

ISBN: 9789355010704 | Price: ₹ 850 | Pages: 1,312 | Size: 6.75" X 9.5" (Paperback)

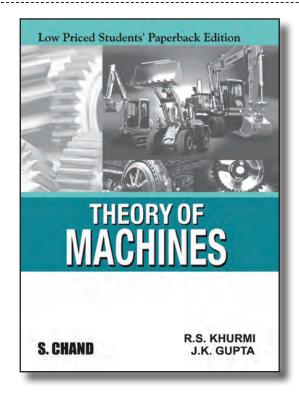
#### **Contents**

- 1. Simple Stresses and Strains
- 2. Principal Stresses and Strains
- 3. Bending Moments and Shearing Forces
- 4. Bending Stresses in Beams
- Combined Direct and Bending Stresses
- 6. Shearing Stresses
- 7. Fixed and Continuous Beams
- 8. Thin Shells
- 09. Torsion of Circular and Non-circular Shaft

- 11. Springs
- 12. Strain Energy and Deflection Due to Shear and Bending
- 13. Columns and Struts
- 14. Theories of Failure
- 15. Stresses Due to Rotation
- 16. Bending of Curved Bars
- 17. Centroid and Moment of Inertia
- 18. Unsymmetrical Bending and Shear Centre
- 19. Analysis of the Framed Structures
- 20. Material Testing

- 21. Universities' Questions (Latest-Selected) With Answers/Solutions,
- 22. GATE and UPSC Examinations'
  Questions (Latest-Selected) with
  Answers/Solutions
- Appendix: Centroid and Moment of Inertia- Important Formulae
- Index

**R K Rajput** is former principal Punjab College of Information Technology and Thapar Polytechnic College.



### Theory of Machines, 14e (LPSPE)

R.S. Khurmi & J.K. Gupta

#### **About the Book**

"Theory of Machines" is designed mainly for the students of mechanical engineering. It focuses on recent developments on the new mechanisms in the field of kinematics. The text seamlessly combines its 40 year experience with the latest methods to be used by students to understand definitions and problems that are solved using elementary methods. The book covers the entire syllabus with a holistic approach.

Contents such as the Kinematics of Motion, Kinetics of Motion, Simple Harmonic Motion, Simple Mechanisms, Velocity in Mechanisms, Turning Moment Diagrams and Flywheel, Steam Engine Valves and Reversing Gears, Torsional Vibrations, Computer Aided Analysis and Synthesis of Mechanisms and Automatic Control formed an important part and have been explained very well.

#### **Salient Features**

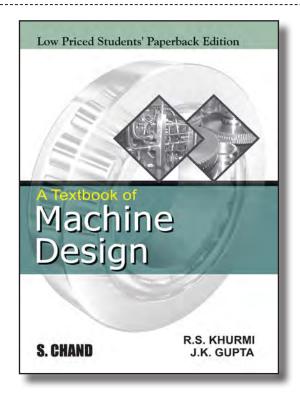
- Every important equation is highlighted for the convenience of the student.
- Close to 1400 examples, figures, tables and pictorial depictions aid to the concepts explained.
- More than 800 chapter-end (objective and "Do-You-Know") and exercise questions add to the practice of the students.

ISBN: 9789355010780 | Price: ₹ 450 | Pages: 1,088 | Size: 6.5" X 9.25" (Paperback)

- 1. Introduction
- 2. Kinematics of Motion
- 3. Kinetics of Motion
- 4. Simple Harmonic Motion
- 5. Simple Mechanisms
- 6. Velocity in Mechanisms (Instantaneous Centre Method)
- 7. Velocity in Mechanisms (Relative Velocity Method)
- 8. Acceleration in Mechanisms
- 9. Mechanisms with Lower Pairs
- 10. Friction
- 11. Belt, Rope and Chain Drives
- 12. Toothed Gearing
- 13. Gear Trains
- 14. Gyroscopic Couple and Processional Motion

- 15. Inertia Forces in Reciprocating Parts
- 16. Turning Moment Diagrams and Flywheel
- 17. Steam Engine Valves and Reversing Gears
- 18. Governors
- 19. Brakes and Dynamometers
- 20. Cams
- 21. Balancing of Rotating Masses
- 22. Balancing of Reciprocating Masses
- 23. Longitudinal and Transverse Vibrations
- 24. Torsional Vibrations
- 25. Computer Aided Analysis and Synthesis of Mechanisms
- 26. Automatic Control
- Index

## Mechanical Engineering



## A Textbook of Machine Design, 34e (LPSPE)

R.S. Khurmi & J.K. Gupta

#### **About the Book**

The person who designs the solution for different engineering problems has to go through the various stages of the design process to arrive at an optimal solution. "A Textbook of Machine Design" studies these design aspects with relevance to machines. It begins with an introduction to the machine design process and engineering materials (with their properties) and goes on to discuss major topics such as manufacturing considerations in machine design, simple stresses in machine parts and internal combustion engine parts.

A book which has seen, foreseen and incorporated changes in the subject for close to 40 years, it continues to be one of the most sought after texts by the students while also helping professionals as well as aspirants of various entrance examinations to really grasp the core concepts of the subject.

#### **Salient Features**

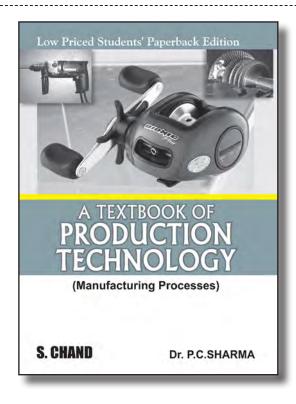
- Divided in 32 chapters, the text amply explains every concept of the subject.
- More than 1100 examples, figures and tables aid to the concepts explained.
- Close to 900 chapter-end questions (objective and subjective) and exercises add to the practice of the students.

ISBN: 9789355010834 | Price: ₹ 999 | Pages: 1,248 | Size: 6.5" X 9.25" (Paperback)

- 1. Introduction
- 2. Engineering Materials and their Properties
- 3. Manufacturing Considerations in Machine Design
- 4. Simple Stresses in Machine Parts
- Torsional and Bending Stresses in Machine Parts
- 6. Variable Stresses in Machine Parts
- 7. Pressure Vessels
- 8. Pipes and Pipe Joints
- 9. Riveted Joints

- 10. Welded Joints
- 11. Screwed Joints
- 12. Cotter and Knuckle Joints
- 13. Keys and Coupling
- 14. Shafts
- 15. Levers
- 16. Columns and Struts
- 17. Power Screws
- 18. Flat belt Drives
- 19. Flat Belt Pulleys
- 20. V-belt and Rope Drives
- 21. Chain Drives

- 22. Flywheel
- 23. Springs
- 24. Clutches
- 25. Brakes
- 26. Sliding Contact Bearings
- 27. Rolling Contact Bearings
- 28. Spur Gears
- 29. Helical Gears
- 30. Bevel Gears
- 31. Worm Gears
- 32. Internal Combustion Engine Parts
- Index



### A Textbook of Production Technology (Manufacturing Processes) 8e (LPSPE)

P.C. Sharma

#### **About the Book**

For more than 20 years, "A Textbook of Production Technology" has been a useful book for undergraduate students of Mechanical Engineering. It is written with the objective of providing comprehensive knowledge about various aspects of materials used in manufacturing process along with the Welding Process, machine tools and ceramic and composite materials.

#### Salient Features

- More than 500 tables, figures and examples aid to the understanding of concepts.
- Almost 1300 chapter-end problems provide consistent practice.
- 4 Appendixes include Machine Variables & Related Relations and problems from competitive examinations and question papers (GATE, IES, UPSC).

ISBN: 9789355010698 | Price: ₹ 725 | Pages: 848 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

- 1. Introduction
- 2. Engineering Materials and Heat Treatment
- 3. The Casting Process
- 4. Mechanical Working of Metals
- 5. The Welding Process
- 6. The Machining Process
- 7. Cutting Tool Materials and Cutting Fluids
- 8. Machine Tools
- 9. Unconventional Manufacturing Methods
- 10. Powder Metallurgy
- 11. Processing of Plastics
- 12. Special Processing Methods

- 13. Ceramic Materials and their Processing
- 14. Composite Materials and their Processing
- 15. Tracer Controlled Machine Tools
- 16. Numerically Controlled Machine Tools
- 17. Surface Finishing Processes

**Appendix-I**: A. Representation of Welds of Drawing IS: 813-1961 & B. Classification of Carbide tips according to their range of application

Appendix-II: Machining Variables and Related Relations

Appendix-III: Problems from Competitive Examinations &

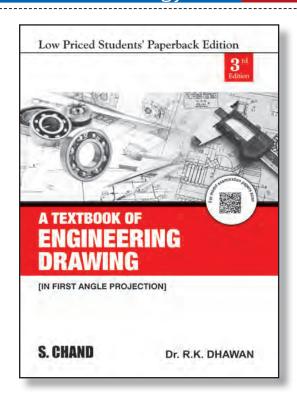
Question Papers (GATE, IES, IAS)

Appendix-IV: Addition Material

Index

P.C. Sharma is LMISME, MISTE and ex. Principal SUSCET, Mohali, Punjab formerly from PEC, Chandigarh.

## Mechanical Engineering



# A Textbook of Engineering Drawing (In First Angle Projection) 3e (LPSPE)

Dr. R.K. Dhawan

#### **About the Book**

Engineering Drawing completely covers the subject as per AICTE. Pedagogically strong and designed for easy learning, the text amplifies the learning of the student with close to 1300 figures and tables.

#### **Salient Features**

- Six New Chapters: Including Centre of Gravity & Moment of Inertia and Nomography
- Pedagogically Strong: More than 1850 Figures, Tables, Examples/ Cases and Problems for better grasp of the topics | Close to 600 Chapter-end questions and problems for better practice.
- On the Website: 20 model examination papers for further practice.

ISBN: 9789352837373 | Price: ₹ 550 | Pages: 776 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

#### Section-I:

- 1. Introduction and Drawing Instruments
- 2. Layout of Drawing Sheet
- 3. Conventions
- 4. Lettering
- 5. Dimensioning
- 6. Scales
- 7. Geometrical Constructions

#### Section-II:

- 1. Loci of Points
- 2. Conic Sections

3. Plane and Space Curves

#### Section-III:

- Theory of Projection and Orthographic Projection
- Orthographic Reading or Interpretation of Views
- 3. Identification of Surfaces
- 4. Missing Lines and Views
- 5. Sectional Views
- 6. Isometric Projections,

- 7. Auxiliary Views
- 8. Freehand Sketching

#### **Section-IV:**

- 1. Projection of Points
- 2. Projections and Traces of Straight Lines
- 3. Projections of Planes
- 4. Projections of Solids
- 5. Sections of Solids
- 6. Intersection of Surfaces
- 7. Development of Surfaces
- 8. Perspective

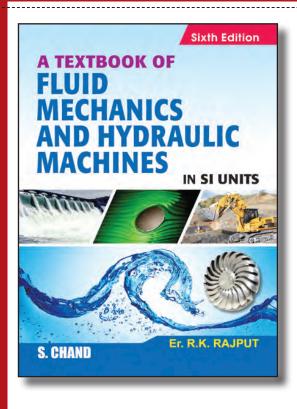
**Projections** 

- 9. Building Drawing
- 10. Centre of Gravity &

Moment of Inertia

- 11. Nomography
- 12. Rivets and Riveted Joints
- 13. Welding
- 14. Screw Threads
- 15. Fastenings
- 16. Computer Aided Drafting
- Model Test Papers

**Dr. R. K. Dhawan,** M.I.E., M.I.S.T.E., is ex Principal Ramgarhia Institute of Engineering & Technology Satnampura, Phagwara (Punjab Technical University, Jalandhar).



### A Textbook of Fluid Mechanics and Hydraulic Machines (In SI Units), 6e

R.K. Rajput

#### Multicolour Edition

#### **About the Book**

Divided in two parts, "A Textbook of Fluid Mechanics and Hydraulic Machines" is one of the most exhaustive texts on the subject for close to 20 years. For the students of Mechanical Engineering, it can easily be used as a reference text for other courses as well. Important topics ranging from Fluid Dynamics, Laminar Flow and Turbulent Flow to Hydraulic Turbines and Centrifugal pumps are well explained in this book.

A total of 23 chapters (combined both units) followed by two special chapters of 'Universities' Questions (Latest) with Solutions' and 'GATE and UPSC Examinations' Questions with Answers/Solutions' after each unit also make it an excellent resource for aspirants of various entrance examinations.

#### **Salient Features**

- Close to 1900 examples, figures, tables and chapter-end highlights aid to the concepts explained.
- · Close to 1200 chapter-end questions for practice.
- University Questions, GATE & UPSC Examination Questions and Laboratory Experiments at the end of both parts add to the practice quotient of the students.

ISBN: 9789385401374 | Code: 1010B00185 | Price: ₹ 1495 | Pages: 1,592 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

Part-I: Fluid Mechanics

- 1. Properties of Fluids
- 2. Pressure Measurement
- 3. Hydrostatic Forces on Surfaces
- 4. Buoyancy and Floatation
- 5. Fluid Kinematics
- 6. Fluid Dynamics
- 7. Dimensional and Model Analysis
- 8. Flow through Orifices and Mouthpieces
- 9. Flow Over Notches and Weirs

- 10. Laminar Flow
- 11. Turbulent Flow in Pipes
- 12. Flow through Pipes
- 13. Boundary Layer Theory
- 14. Flow around Submerged Bodies—Drag and Lift
- 15. Compressible Flow
- 16. Flow in Open Channels

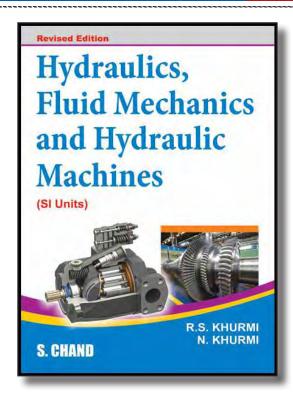
#### Part-II: Hydraulic Machines

- 1. Impact of Free Jets
- 2. Hydraulic Turbines

- 3. Centrifugal Pumps
- 4. Reciprocating Pumps
- 5. Miscellaneous Hydraulic Machines
- 6. Water Power Development
- 7. Fluidics
- 8. Universities' Questions (Latest) with Solutions
- 9. "GATE" and "UPSC" Examinations' Questions with Answers/Solutions (Latest-Selected)
- Laboratory Practical
- Index

R.K. Rajput is former principal Punjab College of Information Technology and Thapar Polytechnic College.





# Hydraulics, Fluid Mechanics and Hydraulic Machines (SI Inits) 20e

R.S. Khurmi & N. Khurmi

Multicolour Edition

#### **About the Book**

For close to 50 years, "Hydraulics, Fluid Mechanics and Hydraulic Machines" has been providing a comprehensive coverage of fluid mechanics and hydraulics for various engineering courses. This text has been revised to incorporate SI units throughout the book. It starts with an overview, then covers Hydrostatics, study and measurement of Fluiad Pressure and introduces Hydrokinematics. The book covers Floating Bodies and their Equilibrium, applications of Bernoulli's equation, Flow through Orifices, Notches, Weirs, and Simple Pipes. It also covers how fluids flow through Open Channels and examines both uniform and non-uniform flows.

#### **Salient Features**

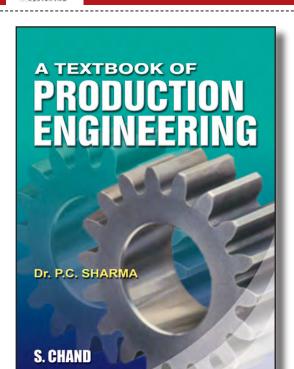
- Divided in 39 chapters, the text succinctly explains every concept of the subject.
- More than 900 examples, figures and tables aid to the concepts explained.
- More than 800 in-text exercise questions and chapter-end questions add to the practice of the students.

### ISBN: 9788121901628 | Code: 1010B00026 | Price: ₹ 850 | Pages: 728 | Size: 6.5" X 9.25" (Paperback)

- 1. Introduction and Properties of Fluids
- 2. Fluid Pressure and its Measurement
- 3. Hydrostatics
- 4. Applications of Hydrostatics
- 5. Equilibrium of Floating Bodies
- 6. Hydro-Kinematics (or Fluid Kinematics)
- Hydro-Dynamics (or Fluid Dynamics) (Bernoulli's & Euler's Equations and Their Applications)
- 8. Flow Through Orifices (Measurement of Discharge)
- 9. Flow Through Orifices (Measurement of Time)
- 10. Flow Through Mouthpieces
- 11. Flow Over Notches
- 12. Flow Over Weirs
- 13. Flow Through Simple Pipes

- 14. Flow Through Compound Pipes
- 15. Flow Through Nozzles
- 16. Uniform Flow Through Open Channels
- 17. Non-Uniform Flow Through Open Channels
- 18. Viscous Flow (Laminar Flow-I)
- 19. Viscous Resistance (Laminar Flow-II)
- 20. Fluid Masses Subjected to Acceleration
- 21. Vortex Flow
- 22. Mechanics of Compressible Flow
- 23. Compressible Flow of Fluids
- 24. Flow Around Immersed Bodies (Drag & Lift) and Boundary Layer Theory
- 25. Dimensional Analysis
- 26. Model Analysis (Undistorted Models)

- 27. Model Analysis (Distorted Models)
- 28. Non-Dimensional Constants
- 29. Impact of Jets
- 30. Jet Propulsion
- 31. Water Wheels
- 32. Impulse Turbines
- 33. Reaction Turbines
- 34. Performance of Turbines
- 35. Centrifugal Pumps
- 36. Reciprocating Pumps
- 37. Performance of Pumps
- 38. Pumping Devices
- 39. Hydraulic Systems (Miscellaneous Hydraulic Machines)
- Index



## A Textbook of Production Engineering, 11e

P.C. Sharma

#### **About the Book**

For more than 30 years, the book has been a very useful resource for the students for undergraduate students of Mechanical Engineering. Divided in 27 chapters, it is written with the objective of providing comprehensive knowledge about various aspects of the subject from process and production planning and control to manufacturing systems and automation thereby providing the student with a holistic idea.

#### **Salient Features**

- Close to 1000 tables, figures and examples aid to the understanding of concepts.
- More than 1000 chapter-end problems provide consistent practice.
- 5 Appendixes include Process Planning Sheets, Gear Manufacturing and problems from competitive examinations and question papers (GATE, IES, UPSC).

ISBN: 9788121901116 | Code: 1010B00038 | Price: ₹ 895 | Pages: 992 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

- 1. Jigs and Fixtures
- 2. Press Tool Design
- 3. Forging Die Design
- 4. Cost Estimation
- 5. Economics of Tooling
- 6. Process Planning
- 7. Tool Layout for Capstans and Turrets
- 8. Tool Layout for Automatics
- 9. Limits, Tolerances and Fits
- 10. Gauges and Gauge Design
- 11. Surface Finish

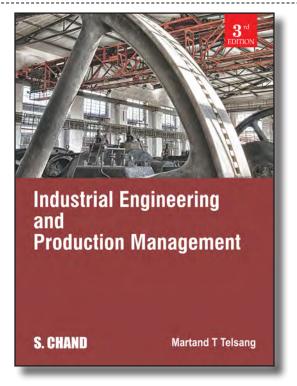
- 12. Measurement
- Analysis of Metal Forming Process
- 14. Theory of Metal Cutting
- 15. Design and Manufacture of Cutting Tools
- 16. Gear Manufacturing
- 17. Thread Manufacturing
- 18. Design of Machine Tool Elements and Machine Tool Testing
- 19. Machine Tool Installation and Maintenance

- 20. Design of Product for Economical Production
- 21. Statistical Quality Control
- 22. Kinematics of Machine Tools
- 23. Production Planning and Control
- 24. Manufacturing Systems and Automation
- 25. Computer Integrated Manufacturing
- 26. Plant Layout
- 27. Production and Productivity
- Appendices-5 (inclusive of Problems from Competitive Examinations)

P.C. Sharma is LMISME, MISTE and ex. Principal SUSCET, Mohali, Punjab formerly from PEC, Chandigarh.

## Mechanical Engineering





## Industrial Engineering and Production Management, 3e

## Martand T Telsang About the Book

For close to 20 years, "Industrial Engineering and Production Management" has been a successful text for students of Mechanical, Production and Industrial Engineering while also being equally helpful for students of other courses including Management.

Divided in 6 parts and 52 chapters, the text combines theory with examples to provide in-depth coverage of the subject.

#### **Salient Features**

- TWENTY FOUR NEW Chapters on major topics such as but not limited to: Job Design, Operations Strategy, Process/Capacity Design, Simulation, Supply Chain Network/Coordination/Performance Drivers, Manufacturing (Lean/Agile/Digital/ Sustainable/ Reconfigurable/ Cellular) and Remanufacturing
- Free On the Website: FIVE NEW Chapters on "Competitive Strategies (Games Theory)", "Lean and Agile Supply Chain", "Information Technologies and Supply Chain", "Materials Management" and "Product and System Reliability"
- More than 700 figures, tables and references aid to the concepts explained and close to 600 chapter-end questions and problems reinforce the concepts by providing adequate practice.

ISBN: 9789352533794 | Price: ₹ 950 | Pages: 1,160 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

#### Section-I: Work System Design

- 1. Introduction to Industrial Engineering
- 2. Productivity & Production Performance
- 3. Work-Study
- 4. Method Study
- 5. Time Study (Work Measurement)
- 6. Job Design
- 7. Value Engineering
- 8. Job Evaluation and Merit Rating
- 9. Wages and Incentives
- 10. Ergonomics

#### Section-II: Production and Operations

#### System Design

- 11. Production and Operations Management: Introduction
- 12. Types of Production System
- 13. Operations Strategy
- 14. Product Design
- 15. Process Planning
- 16. Capacity Planning
- 17. Plant Location

- 18. Plant Layout
- 19. Material Handling

## Section-III: Production Planning & Control

- 20. Production Planning and Control
- 21. Demand Forecasting
- 22. Aggregate Planning
- 23. Inventory Control
- 24. Material Requirement Planning (MRP)
- 25. Production Scheduling and Control
- 26. Maintenance Management
- 27. Project Scheduling with CPM and PERT

#### Section-IV: Quantitative Techniques for

#### **Operations**

- 28. Decision Theory29. Replacement Models
- 30. Queuing Models
- 31. Linear Programming Problems (LPP)
- 32. Simulation Technique
- 33. Production Cost Concepts and Breakeven Analysis

#### Section-V: Supply Chain Management

- 34. Understanding Supply Chain
- 35. Supply Chain Performance Drivers and Metrics
- 36. Supply Chain Network Design
- 37. Supply Chain Coordination and Bullwhip Effect
- 38. Strategic Alliances in Supply Chain
- 39. Supply Chain Integration

## Section-VI: Advances and Trends in

#### **Operations Management**

- 40. Lean Manufacturing
- 41. Just in Time Manufacturing
- 42. Agile Manufacturing
- 43. Digital Manufacturing
- 44. Sustainable Manufacturing
- 45. Reconfigurable Manufacturing Systems
- 46. Remanufacturing
- 47. Materials Management
- Chapter 48–52: Available on www. schandpublishing.com

**Martand T Telsang** is Dean Academics, Sanjay Ghodawat University Kolhapur.



### Operations Research, 7e

Prem Kumar Gupta & D.S. Hira

#### **About the Book**

Comprehensively written in a manner that suites the students of Mechanical Engineering and Commerce & Management, "Operations Research" transmutes deftly into a resource or a reference text for the students of statistics and mathematics or aspirants of various entrance examinations including UPSC.

Coverage of popular topics such as Linear Programming, Probability Theory and Queuing Models are supplemented with numerous examples, tables and figures which are then followed by exercises thereby providing the assurance to fulfil every requirement of understanding of the student.

A book which has seen, foreseen and incorporated changes in the subject for more than 40 years, it continues to be one of the most sought after texts by the students.

#### **Salient Features**

- 16 chapters succinctly cover every crucial concept of the subject.
- Close to 2300 examples, figures and tables aid to the concepts explained.
- 1800+ exercise questions enhance the practice quotient of the book.

ISBN: 9788121902816 | Code: 1010E00087 | Price: ₹ 995 | Pages: 1,512 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

- 1. Basics of Operations Research
- 2. Liner Programming
- 3. The Transportation Model
- 4. The Assignment Model
- 5. Seguencing Models and Related Problems
- 6. Advanced Topics In Liner Programming
- 7. Dynamic Programming
- 8. Probability Theory
- 9. Decision Theory, Game, Investment Analysis and Annuity
- 10. Queuing Models
- 11. Replacement Models
- 12. Inventory Models

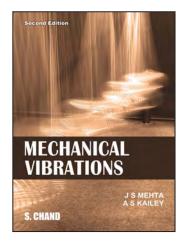
- 13. Simulation
- 14. Network Analysis In Project Planning (PERT And CPM)
- 15. Statistical Quality Control.
- 16. Non Liner Programming
- Appendices:
  - A: Review of Vectors and matrices
  - B: Derivation of Poisson Distribution
- Table C-1: Random Numbers Table
- Table C-2: Proportion of total area under the normal curve from – ∞ to z
- Bibliography
- Index

P.K. Gupta is Former Assistant Professor, PEC Institute of Engineering and Technology, Chandigarh.

D.S. Hira, Director General, Swami Vivekanand Group of Institute, Patiala.

## Mechanical Engineering





#### Mechanical Vibrations, 2e

J.S. Mehta & A.S. Kailey

#### **About the Book**

Written specifically for the students of Mechanical Engineering, "Mechanical Vibrations" is a succinctly written textbook. Without being verbose, the textbook delves into all concepts related to the subject and deals with them in a laconic manner. Concepts such as Freedom Systems, Vibration Measurement and Transient Vibrations have been treated well for the student to get profounder knowledge in the subject.

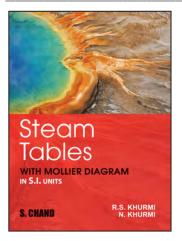
#### **Salient Features**

- A new chapter on "Basics of Sound and Noise" has been added which will be helpful to understand sound intensity, pressure and power besides also providing an in-depth understanding of sound and noise strategy and control.
- Concepts such as Natural Frequency, Damping Ratio, Logarithmic Decrement, Lagrange's Equations and Laplace
  Transformation among others have been applied in various in-text examples to accentuate the topic at hand and
  also provide the learners with practice to further their understanding.
- Learning Objectives, aptly places figures and examples (close to 500) and chapter-end questions (close to 300)
  embellish the process of understanding of each concept of the text.

ISBN: 9789352533824 | Code: 9789352533824 | Price: ₹ 415 | Pages: 392 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

- 1. Concepts and Terminology, 2. Undamped Free Vibrations of Single Degree of Freedom Systems, 3. Damped Free Vibrations of Single Degree of Freedom Systems, 4. Forced Vibrations of Single Degree of Freedom Systems, 5. Two Degree of Freedom Systems, 6. Multi Degree of Freedom Systems, 7. Continuous Systems, 8. Whirling of Shafts, 9. Vibration Measurement, 10. Transient Vibrations, 11. Basics of Sound and Noise, \* Index
- J.S. Mehta is Assistant Professor, Mechanical Engineering Department, UIET, PU, Chandigarh.
- A.S. Kailey is Assistant Professor, Mechanical Engineering Department, B.B.S.B.E.C., Fatehgarh Sahib.



## Steam Tables With Mollier Diagrams in S.I. Units

R S Khurmi & N Khurmi

#### **About the Book**

The objective of "Steam Tables: With Mollier Diagrams in S.I. Units" is to present the various properties of water and steam in a most concise form. This has been a useful text for the students of Mechanical Engineering for more than 30 years.

#### **Salient Features**

Introduction to Steam Tables (Temperature) and Mollier Diagrams provides brief recapitulation of the topic.

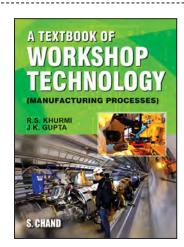
ISBN: 9788121906548 | Code: 1010A00044 | Price: ₹ 110 | Pages: 32 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

Rules for S.I. Units Introduction to Steam Tables (Temperature) and Mollier Diagrams, 1. Saturated Water and Steam (Temperature) Tables, 2. Saturated Water and Steam (Pressure) Tables, 3. Specific Volume of Superheated Steam, 4. Specific Enthalpy of Superheated Steam, 5. Specific Entropy of Superheated Steam, 6. Specific Volume, Enthalpy and Entropy of Supercritical Steam



# Engineering & Technology



## A Textbook of Workshop Technology (Manufacturing Processes) 16e

R.S. Khurmi & J.K. Gupta

#### **About the Book**

"A Textbook of Workshop Technology (Manufacturing Processes)" is an all-inclusive text for students as it takes a detailed look at all concepts of the subject. Distributed evenly in 26 chapters, important focusses are laid on metals, alloys, equipment and fittings amongst others.

Each chapter contains solved examples supported by exercises and chapter-end questions which aid to the understanding of the concepts explained. A book which has seen, foreseen and incorporated changes in the subject for close to 40 years, it continues to be one of the most sought after texts by the students for all aspects of the subject.

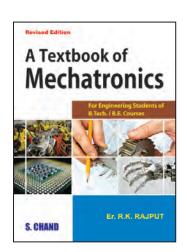
#### **Salient Features**

- 26 chapters provide an in-depth coverage of every important concept in the subject.
- More than 600 figures and tables aid to the concepts explained.
- Close to 700 chapter-end questions add to the practice of the students.

ISBN: 9788121908689 | Code: 6010B00155 | Price: ₹ 610 | Pages: 560 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Introduction, 2. Industrial Safety, 3. Fundamentals of Metals and Alloys, 4. Properties, Testing and Inspection of Metals, 5. Ferrous Metals and Alloys, 6. Non-Ferrous Metals and Alloys, 7. Heat Treatment of Metals and Alloys, 8. Mechanical Working of Metals, 9. Carpentry and Joinery, 10. Pattern Making, 11. Foundry Tools and Equipment, 12. Moulding and Core Making, 13. Special Casting Processes, 14. Smithy and Forging, 15. Welding, 16. Bench Work and Fitting, 17. Sheet Metal Work, 18. Rivets and Screws, 19. Limit System and Surface Finish, 20. Measuring Instruments and Gauges, 21. Quality Control, 22. Powder Metallurgy, 23. Plastics, 24. Metallic and Non-metallic Coatings, 25. Pipes and Pipe Fittings, 26. Machine Tools (Introduction) • *Index* 



### A Textbook of Mechatronics, 4e

R.K. Rajput

#### **About the Book**

"A Textbook of Mechatronics" is a comprehensive textbook for the students of Mechanical Engineering and a mustbuy for the aspirants of different entrance examinations including GATE and UPSC.

Divided into 10 chapters, the book delves into the subject beginning from Basic Concepts and goes on to discuss elements of CNC Machines and Robotics. The book also becomes useful as a question bank for students as it offers university questions with answers.

#### **Salient Features**

- Special Introduction to S.I. Units and Conversion Factors are followed by 10 succinctly written chapters which
  encompass all concepts. A special section on university questions with answers and 40 Appendixes provide
  additional support to the theory explained.
- More than 700 examples, figures, tables and chapter-end highlights aid to the concepts explained.
- Close to 850 chapter-end Theoretical Questions, Objective Type Question and Unsolved Examples provide rigorous practice.

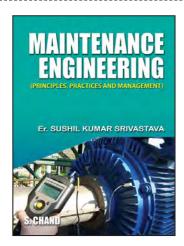
ISBN: 9788121928595 | Code: 1010D00343 | Price: ₹ 799 | Pages: 816 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

Introduction to SI Units and Conversion Factors, 1. Introduction to Mechatronics, Measurement Systems and Control Systems, 2. Sensors and Transducers, 3. Signal Conditioning, Data Acquisition, Transmission and Presentation/Display, 4. Actuators - Mechanical, Electrical, Hydraulic, Pneumatic, 5. System Models and Controllers, 6. Basic and Digital Electronics, 7. Microprocessors, 8. Design of Mechatronic Systems, 9. Elements of CNC Machines, 10. Robotics • Universities' Questions with Answers • Appendix-A: Basic Mechanical Concepts • Appendix-B: Basic Electrical Concepts • Index

**R K Rajput** is former principal Punjab College of Information Technology and Thapar Polytechnic College.





## Maintenance Engineering (Principles, Practices and Management)

Sushil Kumar Srivastava

#### **About the Book**

For close to 20 years, "Maintenance Engineering" has been a resourceful textbook for the students of Mechanical Engineering, Maintenance Engineering, Maintenance Technology and Maintenance Management. Written lucidly, the book is divided in 16 parts and delves into all concepts in a rational format – beginning with the Overview and going on to explain Maintenance Technologies, TPM, HRD for Maintenance Personnel and Maintenance Engineer and Maintenance Troubleshooting among other concepts.

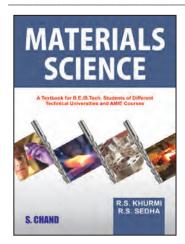
#### **Salient Features**

- Systematic approach to each of the chapters help capture the subject in its entirety without being too edifying in nature.
- More than 200 within-chapter and chapter-end features aid to the understanding of concepts.

## ISBN: 9788121926447 | Code: 1010C00317 | Price: ₹ 425 | Pages: 320 | Size: 6.5" X 9.25" (Paperback) Contents

1. Introduction and Maintenance Overview, 2. Productivity Quality Reliability and Maintainability (PQRM), 3. Maintenance and Repair Jobs and Technologies, 4. Defect /Failure List Generation and Failure Analysis, 5. Maintenance Strategies/Types/Systems, 6. Condition Monitoring (CM), 7. Maintenance Planning and Scheduling, 8. Codification, Cataloguing and System Approach, 9. Computerized Maintenance Management System (CMMS), 10. Total Productive Maintenance (TPM), 11. Other Concepts of Maintenance Systems /Strategies, 12. Maintenance Organization, 13. Maintenance Effectiveness, Performance Evaluation /Indices and Audit, 14. Maintenance Budgeting, Costing and Cost Control, 15. Training (HRD) for Maintenance Personnel, 16. Maintenance Engineer and Maintenance Troubleshooting • Bibliography

Sushil Kumar Srivastava is MIE, Member – FPS and Director, OTMEC, Durgapur (West Bengal).



#### Materials Science, 5e

R.S. Khurmi & R.S. Sedha

#### **About the Book**

"Materials Science" is a go-to textbook for the students of engineering for understanding the fundamental concepts of the subject. A lucidly and well-planned text, it deals with every concept individually and provides a holistic view to every concept.

A book which has seen, foreseen and incorporated changes in the subject for more than 30 years, it continues to be one of the most sought after texts by the students for all aspects of the subject.

#### **Salient Features**

- 1. 4 parts dedicatedly explain all important concepts of the subject.
- 2. Close to 250 questions specifically for the students of AMIE courses.
- 3. More than 400 within-chapter and chapter-end features to add to the learning of concepts.

ISBN: 9788121901468 | Code: 1010C00109 | Price: ₹ 425 | Pages: 384 | Size: 6.5" X 9..5" (Paperback)

#### **Contents**

Part-I: Science of Metals: 1. Introduction, 2. Structure of Atoms, 3. Crystal Structure, 4. Bonds in Solids, 5. Electron Theory of Metals, Part-II: Mechanical Behaviour of Metals: 6. Mechanical Properties of Metals, 7. Mechanical Tests of Metals, 8. Deformation of Metals, 9. Fracture of Metals, Part-III: Engineering Metallurgy: 10. Iron-Carbon Alloy System, 11. Heat Treatment, 12. Corrosion of Metals, Part-IV: Engineering Materials: 13. Ferrous and Non-Ferrous Alloys, 14. Organic Materials, 15. Composite Materials and Ceramics, 16. Semiconductors, 17. Insulating Materials, 18. Magnetic Materials • Appendix-I: Value of Physical Constants • Appendix-II: Physical Properties of Selected Metals • Index

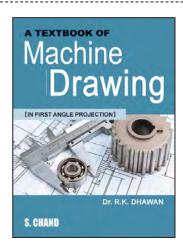


# Engineering & Technology

Multicolour Edition

Multicolour

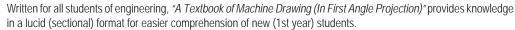
Edition



## A Textbook of Machine Drawing (In First Angle Projection), 2e

R.K. Dhawan

#### **About the Book**



Filled with figures and in-text problems, the text successfully helps the student not only comprehend but practice and retain the understanding of otherwise difficult concepts. A book which has seen, foreseen and incorporated changes in the subject for more than 20 years, it continues to be one of the most sought after texts by the students.

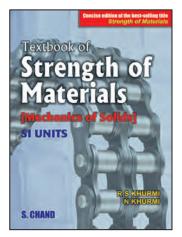
#### Salient Features

- The text is divided in 3 parts and 35 chapters each for a critical concept of the subject. Apart from that, 12 bookend Model Test Papers assess the overall understanding of the subject.
- Numerous notes (highlighted) are strategically placed throughout the text to supplement the concepts explained
- More than 1850 figures, solved problems, tables, cases and chapter-end questions add rigour to a lucidly written text.

ISBN: 9788121908245 | Code: 1010F00148 | Price: ₹ 910 | Pages: 744 | Size: 6.5" X 9.25" (Paperback)

#### Contents

Section-I: 1. Introduction and Drawing Instruments, 2. Layout of Drawing Sheet, 3. Conventions, 4. Lettering, 5. Dimensioning, 6. Scales, Section-II: 1. Theory of Projection and Orthographic Projection, 2. Orthographic Reading or Interpretation of Views, 3. Identification of Surfaces, 4. Missing Lines and Views, 5. Sectional Views, 6. Isometric Projections, 7. Auxiliary Views, 8. Freehand Sketching, 9. Sections of Solids, Section-III: 1. Production Drawings, 2. Limits, Fits and Machining Symbols, 3. Rivets and Riveted Joints, 4. Welding, 5. Screw Threads, 6. Fastenings, 7. Keys, Cutters and Joints, 8. Shaft Couplings, 9. Bearings, 10. Brackets, 11. Pulleys, 12. Pipe Joints, 13. Steam Engine Parts, 14. I.C. Engine Parts, 15. Valves, 16. Gears, 17. Cams, 18. Jigs and Fixtures, 19. Miscellaneous Drawings, 20. Computer Aided Drafting • Model Test Papers



## Textbook of Strength of Material, Concise Edition (Mechanics of Solids)

R.S. Khurmi & N Khurmi

#### **About the Book**

"Strength of Materials: Mechanics of Solids in SI Units" is an all-inclusive text for students as it takes a detailed look at all concepts of the subject. Distributed evenly in 32 chapters, important focusses are laid on stresses, strains, inertia, force, beams, joints and shells amongst others.

Each chapter contains solved examples supported by exercises and chapter-end questions which aid to the understanding of the concepts explained. A book which has seen, foreseen and incorporated changes in the subject for close to 50 years, it continues to be one of the most sought after texts by the students for all aspects of the subject.

#### **Salient Features**

- 32 chapters provide an in-depth coverage of every important concept in the subject.
- Close to 1000 examples, figures and tables aid to the concepts explained.
- Close to 600 in-text exercise questions and chapter-end questions add to the practice of the students.

ISBN: 9789385401954 | Code: 1010000661 | Price: ₹ 795 | Pages: 752 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

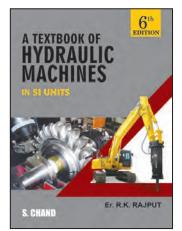
1. Introduction, 2. Mechanical Properties of Materials (Stress-Strain Diagram), 3. Simple Stresses and Strains, 4. Stresses and Strains in Bars of Varying Sections, 5. Stresses and Strains in Statically Indeterminate Structures, 6. Thermal Stresses and Strains, 7. Elastic Constants, 8. Principal Stresses and Strains, 9. Strain Energy and Impact Loading, 10. Centre of Gravity, 11. Moment of Inertia, 12. Analysis of Perfect Frames (Analytical Method), 13. Bending Moment and Shear Force, 14. Bending Stresses in Simple Beams, 15. Bending Stresses in Composite Beams, 16. Shearing Stresses in Beams, 17. Direct and Bending Stresses, 18. Deflection of Beams, 19. Deflection of Cantilevers, 20. Deflection by Moment Area Method, 21. Torsion of Circular Shafts, 22. Springs, 23. Thin Cylindrical and Spherical Shells, 24. Thick Cylindrical and Spherical Shells, 25. Columns and Struts, 26. Propped Cantilevers and Beams, 27. Fixed Beams, 28. Theorem of Three Moments, 29. Strain Energy & Deflection Due to Bending & Shear (and Castigliano's Theorem), 30. Bending of Curved Bars, 31. Theories of Failure, 32. Testing of Materials \* Appendix \* Index\*





## Mechanical Engineering





## A Textbook of Hydraulic Machines (SI Units), 6e

R.K. Rajput



### **About the Book**

Written primarily for the students of Civil and Mechanical Engineering, "A Textbook of Hydraulic Machines" has been written in lucidly and captures the essence in an apt and non-repetitive manner. Aided by a number of solved problems, including typical examples from examination point of view, the book has been a benchmark in the subject for close to 20 years.

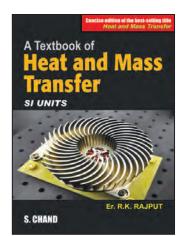
## **Salient Features**

- The text tackles all major concepts of the subject in a concise but meticulous manner.
- 450+ Examples, Figures and chapter-end highlights aid to the understanding of students.
- 350+ chapter-end MCQs, Theoretical Questions and Unsolved Examples as well as book-end GATE and UPSC
  examination questions with answers are provided for practice.

ISBN: 9789385676314 | Code: 1010C00194 | Price: ₹ 795 | Pages: 472 | Size: 6.75" X 9.5" (Paperback) Contents

1. Impact of Free Jets, 2. Hydraulic Turbines, 3. Centrifugal Pumps, 4. Reciprocating Pumps, 5. Miscellaneous Hydraulic Machines, 6. Water Power Development, 7. Fluidics, 8. Universities' Questions (Latest) with "Solutions", 9. GATE and UPSC Examinations' Questions with Answers/Solutions (Latest-Selected) • Laboratory Practicals • Index

R K Rajput is former principal Punjab College of Information Technology and Thapar Polytechnic College.



## A Textbook of Heat and Mass Transfer (SI Units), Concise Edition

R.K. Rajput

## **About the Book**

"A Textbook of Heat and Mass Transfer" is a comprehensive textbook for the students of Mechanical Engineering and a must-buy for the aspirants of different entrance examinations including GATE and UPSC.

Divided into 4 parts, the book delves into the subject beginning from Basic Concepts and goes on to discuss Heat Transfer (by Convection and Radiation) and Mass Transfer. The book also becomes useful as a question bank for students as it offers university as well as entrance exam questions with solutions.

### **Salient Features**

- Introductory chapter explains all basic theories of the subject followed by 10 succinctly written chapters which
  encompass all basic concepts.
- Close to 950 examples, figures, tables and chapter-end highlights aid to the concepts explained.
- Close to 500 chapter-end Theoretical Questions, Unsolved Examples and book-end MCQs provide rigorous practice.

ISBN: 9789385401930 | Code: 1010000659 | Price: ₹ 750 | Pages: 776 | Size: 6.75" X 9.5" (Paperback) Contents

1. Basic Concepts, Part-I: Heat Transfer by "Conduction": 2. "Conduction" Heat Transfer at Steady State – One Dimension, 3. Conduction Heat Transfer at Steady State – Two Dimensions and Three Dimensions, 4. Heat Conduction-Transient (Unsteady State), Part-II: Heat Transfer by "Convection": 5. Heat Transfer By "Forced Convection", 6. Heat Transfer By "Free Convection", 7. Boiling and Condensation, 8. Heat Exchangers, Part-III: Heat Transfer by "Radiation": 9. Heat Transfer By Radiation, Part-IV: Mass Transfer: 10. Mass Transfer • Multiple-Choice Questions Bank with Answers • Index

**R K Raiput** is former principal Punjab College of Information Technology and Thapar Polytechnic College.

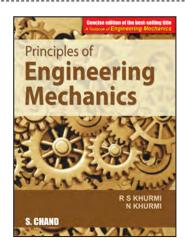


## Mechanical Engineering

# Engineering & Technology

Multicolour

Edition



## Principles of Engineering Mechanics, Concise Edition

R.S. Khurmi & N. Khurmi

### **About the Book**

"A Textbook of Engineering Mechanics" is a must-buy for all students of engineering as it is a lucidly written textbook on the subject with crisp conceptual explanations aided with simple to understand examples.

Important concepts such as Moments, Inertia, Motion (Linear, Projectile, Harmonic and Connected Bodies), as well as Work, Power and Energy are explained with ease for the learner to really grasp the subject in its entirety.

A book which has seen, foreseen and incorporated changes in the subject for 50 years, it continues to be one of the most sought after texts by the students.

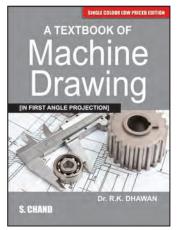
## **Salient Features**

- · 33 chapters evenly explain all major theories of the subject.
- · Close to 1000 figures, tables and examples aid to the concepts explained.
- Close to 650 in-text exercise questions and chapter-end questions for practice.

## ISBN: 9789385401947 | Code: 1010000660 | Price: ₹ 725 | Pages: 688 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Introduction, 2. Forces, 3. Moments, 4. Parallel Forces and Couples, 5. Equilibrium of Forces, 6. Centre of Gravity, 7. Moment of Inertia, 8. Principles of Friction, 9. Applications of Friction, 10. Principles of Lifting Machines, 11. Simple Lifting Machines, 12. Support Reactions, 13. Analysis of Perfect Frames (Analytical Method), 14. Virtual Work, 15. Linear Motion, 16. Motion Under Variable Acceleration, 17. Relative Velocity, 18. Projectile Motion, 19. Motion of Rotation, 20. Combined Motion of Rotation and Translation, 21. Simple Harmonic Motion, 22. Laws of Motion, 23. Motion of Connected Bodies, 24. Helical Springs and Pendulums, 25. Collision of Elastic Bodies, 26. Motion along a Circular Path, 27. Work, Power and Energy, 28. Mass Moment of Inertia, 29. Kinetics of Motion of Rotation, 30. Transmission of Power by Belts and Ropes, 31. Transmission of Power by Gear Trains, 32. Work-Energy Method, 33. Forces in Space (In Vector Form) • Appendix • Index



## A Textbook of Machine Drawing (In First Angle Projection)

R.K. Dhawan

## **About the Book**

Written for all students of engineering, "A Textbook of Machine Drawing (In First Angle Projection)" provides knowledge in a lucid (sectional) format for easier comprehension of new (1st year) students.

Filled with figures and in-text problems, the text successfully helps the student not only comprehend but practice and retain the understanding of otherwise difficult concepts. A book which has seen, foreseen and incorporated changes in the subject for more than 20 years, it continues to be one of the most sought after texts by the students.

## **Salient Features**

- The text is divided in 3 parts and 35 chapters each for a critical concept of the subject. Apart from that, 12 bookend Model Test Papers assess the overall understanding of the subject.
- Numerous notes (highlighted) are strategically placed throughout the text to supplement the concepts explained
- More than 1850 figures, solved problems, tables, cases and chapter-end questions add rigour to a lucidly written text.

## ISBN: 9789385676499 | Code: 1010000667 | Price: ₹ 750 | Pages: 746 | Size: 6.5" X 9.25" (Paperback)

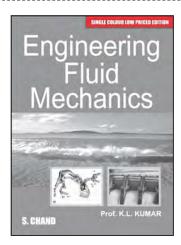
## **Contents**

Section-I: 1. Introduction and Drawing Instruments, 2. Layout of Drawing Sheet, 3. Conventions, 4. Lettering, 5. Dimensioning, 6. Scales, Section-II: 1. Theory of Projection and Orthographic Projection, 2. Orthographic Reading or Interpretation of Views, 3. Identification of Surfaces, 4. Missing Lines and Views, 5. Sectional Views, 6. Isometric Projections, 7. Auxiliary Views, 8. Freehand Sketching, 9. Sections of Solids, Section-III: 1. Production Drawings, 2. Limits, Fits and Machining Symbols, 3. Rivets and Riveted Joints, 4. Welding, 5. Screw Threads, 6. Fastenings, 7. Keys, Cutters and Joints, 8. Shaft Couplings, 9. Bearings, 10. Brackets, 11. Pulleys, 12. Pipe Joints, 13. Steam Engine Parts, 14. I.C. Engine Parts, 15. Valves, 16. Gears, 17. Cams, 18. Jigs and Fixtures, 19. Miscellaneous Drawings, 20. Computer Aided Drafting • 12 - Model Test Papers

R.K. Dhawan, M.I.E., M.I.S.T.E., is Principal Ramgarhia Institute of Engineering & Technology Satnampura, Phagwara (Punjab Technical University, Jalandhar).

## Mechanical Engineering





## **Engineering Fluid Mechanics**

K.L. Kumar

## **About the Book**

"Engineering Fluid Mechanics" caters to many engineering disciplines and discusses important concepts such as Fluid Statics, Kinematics, Dynamics as well as Flow (Laminar, Boundary Layer and Open Channels) among other topics. Each chapter contains solved examples supported by exercises, supplementary revision examples and chapter-end questions which aid to the understanding of the concepts explained.

A book which has seen, foreseen and incorporated changes in the subject for over 40 years, it continues to be one of the most sought after texts by the students for all aspects of the subject.

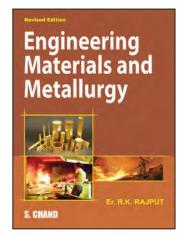
## **Salient Features**

- A unique "Zero Chapter" with a visual focus along with Learning Objectives in Engineering Fluid Mechanics eases
  the student into the subject.
- Seven Appendixes (including Review of Vector Operations and Properties of Liquids, Gases and Vapours) add to the understanding of students.
- 550+ Tables, Figures and Examples along with almost 450 questions help the text by aiding the understanding of concepts and providing rigorous practice.

ISBN: 9789385676482 | Code: 1010000666 | Price: ₹ 650 | Pages: 624 | Size: 6.5" X 9.25" (Paperback)

#### **Contents**

- 0. The world of Fluid Mechanics: What, Why and How?, 1. Introduction Concepts, 2. Fluid Statics, 3. Fluid Kinematics, 4. Fluid Dynamics, 5. Flow Measurement, 6. Ideal Fluid Flow, 7. Laminar Flow, 8. Boundary Layer Flow, 9. Flow around Immersed Bodies, 10. Flow through Pipes, 11. Flow through Open Channels, 12. Compressible Flow, 13. Dimensional Analysis and Similitude, 14. Fluid Machines Appendices: 1. Review of SI Units, 2. Review of Vector Operations, 3. Plane Geometrical Figures, 4. International Standard Atmosphere, 5. Properties of Liquids, 6. Properties of Liquids, 7. Properties of Vapours and Gases, 8. Basic Properties of Air and Water Nomenclature Subject Index
- **K L Kumar** is PhD (London), FIE (India), MASEE (USA) and Professor, Faculty of Engineering and Technology, University of Botswana, Gaborone and former Professor, IIT Delhi.



## Engineering Materials and Metallurgy, 2e

R.K. Rajput

#### **About the Book**

For more than a decade, "Engineering Materials and Metallurgy" has been a go-to text for understanding the principal concepts of the two subjects. Written lucidly, the coverage includes important topics such as Alloys, Phase Diagrams, Heat Treatment, Ferrous (and Non-Ferrous) Metals, Non-Metallic Materials and Mechanical Properties and Testing.

### **Salient Features**

- A unique "Zero Chapter" with a focus on review of basic concepts including Structure of Atoms and Molecules, Miller Indices, Imperfections (Defects) in Crystals and Grain Size Determination.
- Close to 250+ Tables, Examples, Figures and chapter-end highlights aid to the understanding of students.
- A staggering 1100+ chapter-end Theoretical Questions and Objective Type Questions as well as book-end Short-Answer questions and OTQs with answers are provided for practice.

ISBN: 9788121927093 | Code: 1010B00318 | Price: ₹ 345 | Pages: 344 | Size: 6.5" X 9.25" (Paperback)

## **Contents**

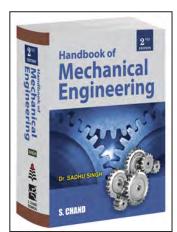
Review Basic Concepts (Structure of Atoms and Molecules, Miller Indices, Imperfections (Defects) in Crystals, Grain Size Determination), 1. Constitution of Alloys and Phase Diagrams, 2. Heat Treatment, 3. Ferrous and Non-Ferrous Metals, 4. Non-Metallic Materials, 5. Mechanical Properties and Testing • Short Answer Questions • Objective Type Test Questions (with Answers) • Index

R.K. Rajput is former principal Punjab College of Information Technology and Thapar Polytechnic College.



## Mechanical Engineering

# Engineering & Technology



## Handbook of Mechanical Engineering, (Library Editions)

Sadhu Singh

## **About the Book**

Handbook of Mechanical Engineering is a comprehensive text for the students of B.E./B.Tech. and the candidates preparing for various competitive examination like IES/IFS/ GATE State Services and competitive tests conducted by public and private sector organization for selecting apprentice engineers.

#### **Salient Features**

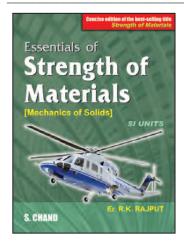
- Adequate Coverage: Divided into 5 major parts, it covers every aspect of Mechanical Engineering.
- · Pedagogically strong (Part-VI):
  - 600 Solved Examples
  - · 4200 MCQs with Explanatory Notes
  - · 500 Assertion and Reason Questions
  - · 550 Short Answer Questions

ISBN: 9788121935876 | Price: ₹ 1995 | Pages: 2,344 | Size: 6.5" X 9.25" (Paperback)

## **Contents**

Part-I: Engineering Mathematics: 1. Engineering Mathematics, Part-II: Design Engineering: 2. Engineering Mechanics, 3. Strength of Materials, 4. Theory of Machines, 5. Mechanical Vibrations, 6. Design of Machine Elements, 7. Engineering Materials and Material Science, Part-III: Production Engineering: 8. Metal Casting Processes, 9. Fabrication Processes, 10. Metal Forming Processes, 11. Machining and Machine Tool Operations, 12. Tool Engineering, 13. Metrology and Inspection, Part-IV: Industrial Engineering: 14. Work Study, 15. Production Planning and Control, 16. Inventory Control, 17. Operations Research, Part-V: Thermal Engineering: 18. Fluid Mechanics, 19. Fluid Machinery, 20. Thermodynamics, 21. Internal Combustion Engineering, 22. Power Plant Engineering, 23. Turbomachinery, 24. Heat and Mass Transfer, 25. Refrigeration and Air-Conditioning, Part-VI: 26. Assertion and Reason, 27. Short Answer Type Questions, 28. Glossary of Terms in Mechanical Engineering

**Sadhu Singh** is Former Professor & Head, Mechanical Engineering Department and Dean, Faculty of Engineering & Technology, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar. He is also Former Director (Colleges), Punjab Technical University, Jalandhar.



# Essentials of Strength of Materials, Concise Edition (Mechanics of Solid)

R K Rajput

## **About the Book**

This book which deals with the various topics in the subject of Strength of Materials exhaustively. It present the subject-matter in a lucid, direct and easily understandable style. A large number of worked out simple, moderate and difficult problems are arranged in a systematic manner to enable the students to grasp the subject effectively, from examination point of view.

The book comprises of 18 chapters (including advance topics) covering the syllabi in the subject of "Strength of Materials" of all the Indian Universities and Competitive Examinations as well. It contains Experiments at the end of the chapters to enable the students to have an access to the practical aspects of the subject.

## **Salient Features**

- Typical Examples: useful for students appearing in competitive examinations in particular and other students in general
- Highlights, Objective Type Questions and a large number of Unsolved Examples

ISBN: 9789385401961 | Code: 1010000662 | Price: ₹ 995 | Pages: 988 | Size: 6.5" X 9.25" (Paperback)

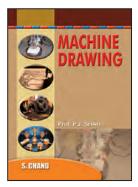
## Contents

1. Simple Stresses and Strains, 2. Principal Stresses and Strains, 3. Bending Moments and Shearing Forces, 4. Bending Stresses in Beams, 5. Combined Directand Bending Stresses, 6. Shearing Stresses, 7. Deflection of Beams, 8. Fixed and Continuous Beams, 9. Thin Shells, 10. Thick Shells, 11. Torsion of Circular and Non-Circular Shafts, 12. Springs, 13. Strain Energy and Deflection Due to Shear and Bending, 14. Columns and Struts, 15. Theories of Failure, 16. Stresses due to Rotation, 17. Bending of Curved Bars, 18. Unsymmetrical Bending and Shear Centre • Appendix: Centroid and Moment of Inertia— Important Formulae • Index

**R K Rajput** is former principal Punjab College of Information Technology and Thapar Polytechnic College.

## Mechanical Engineering





## **Machine Drawing**

P.J. Shah

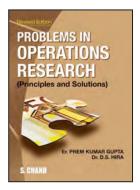
ISBN: 9788121929660 Code: 1010000358

Price: ₹ 250 | Pages: 258 Size: 6.75" X 9.5" (Paperback)

#### **Contents**

15. Orthographic Projections, 16. Sectional Orthographic Projections, 17. Orthographic Reading, 18. Isometric (Projection/View/Drawing) (Axonometric Projection), 19. Details and Assembly Drawings, 20. Dimensioning, 21. Fasteners, 22. Couplings, 23. Bearings • Solutions of Exercises

**P J Shah** is Former Professor, Mechanical Engineering, L.D. College of Engineering, Ahmedabad.



## Problems in Operations Research (Principles and Solutions) 3e

Prem Kumar Gupta & D.S. Hira



ISBN: 9788121909686 Code: 1010C00128

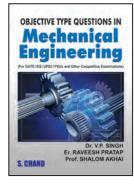
Price: ₹ 995 | Pages: 1,304 Size: 6.75" X 9.5" (Paperback)

## **Contents**

Basics of Operations Research, 2. Linear Programming, 3. The Transportation Model,
 The Assignment Model, 5. Sequencing Models and Related Problems, 6. Advanced Topics in Linear Programming, 7. Dynamic Programming, 8. Decision Theory, Games,
 Investment Analysis and Annuity, 10. Queuing Models, 11. Replacement Models,
 Inventory Models, 13. Simulation, 14. Network Analysis in Project Planning (PERT and CPM),
 Statistical Quality Control, 16. Non-Linear Programming • Bibliography,
 Index

**Pream Kumar Gupta** is Former Assistant Professor, PEC Institute of Engineering and Technology, Chandigarh.

D.S. Hira is Director General, Swami Vivekanand Group of Institute, Patiala.



## Objective Type Questions in Mechanical Engineering

V.P. Singh, Raveesh Pratap & Shalom Akhai

ISBN: 9789383746019 Code: 1010000618 Price: ₹ 550 | Pages: 672 Size: 6.75" X 9.5" (Paperback)

#### Contents

1. Engineering Mechanics, 2. Strength of Materials, 3. Theory of Machines, 4. Vibration, 5.MachineDesign, 6. FluidMechanics and Machinery, 7. HeatTransfer, 8. Thermodynamics, 9. Internal Combustion Engines, 10. Power Plant Engineering, 11. Refrigeration and Air Conditioning, 12. Engineering Materials, 13. Industrial Engineering, 14. Manufacturing Engineering • Question Paper (ME-GATE) • Bibliography

**V P Singh** is member, Board of Management and Chairman (PG Admissions) as well as Former Head of Mechanical Engineering Department, PEC University of Technology, Chandigarh.

Raveesh Pratap is a Former Assistant Manager, Godrej Ltd.

Shalom Akhai is a Faculty PEC University of Technology, Chandigarh.



# Applied Mechanics (SI Units)

R S Khurmi & N Khurmi

ISBN: 9788121916431 Code: 1010B00191 Price: ₹ 525 | Pages: 408 Size: 6.5" X 9.25" (Paperback)

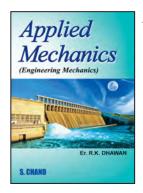
#### **Contents**

1. Introduction, Part-1: Statics-Force System: 2. Forces-Composition of Forces, Resolution of a Force, Laws of Forces, 3. Moments and Their Applications (Including Varignon's Principle), 4. Parallel Forces and Couples, 5. Equilibrium of Forces, Free Body Diagrams, Lami's Theorem and Equations of Static Equilibrium, 6. Support Reactions, Part-2 Centroid and Moment of Inertia: 7. Centre of Gravity and Centroid, 8. Moment of Inertia, Part-3: Friction: 9. Principles of Friction, 10. Application of Friction (Ladder, Wedge and Screw Friction), Part-4: Machines: 11. Principles of Lifting Machines, 12. Simple Lifting Machines, Part-5: Dynamic (Kinematics and Kinetics) Kinematics of Particle: 13. Linear Motion Under Uniform Acceleration (Equations of Rectilinear Motion), 14. Projectile Motion (Curvilinear Motion-I). Part-6: Kinematics of Rigid Body: 15. Motion of Rotation, Part-7: Kinetics of Particle: 16. Motion along a Circular Path (Curvilinear Motion-II) (Centripetal & Centrifugal Force & Acceleration), 17. Laws of Motion, Force, D Alembert's Principle, Dynamic Equilibrium, Momentum and Impulse, 18. Impact due to Collision of Elastic Bodies and Law of Conservation of Momentum, 19. Work, Power, Energy and Law of Conservation of Energy, Part-8: Trusses: 20. Analysis of Perfect Frames (Analytical Method) • Index



## Mechanical Engineering

# Engineering & Technology



# Applied Mechanics (Engineering Mechanics)

R.K. Dhawan

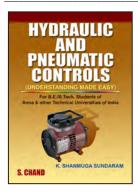
Multicolour Edition

ISBN: 9788121935920 Code: 1010000462 Price: ₹ 295 | Pages: 240 Size: 6.75" X 9.5" (Paperback)

#### Contents

1. Basic Concepts, 2. Laws of Forces, 3. Moments, 4. Friction, 5. Centre of Gravity, 6. Simple Machines, 7. Moments of Inertia • Laboratory Experiments – Eight • Model Test Papers – Two

**R K Dhawan,** M.I.E., M.I.S.T.E, is Principal Ramgarhia Institute of Engineering & Technology Satnampura, Phagwara (Punjab Technical University, Jalandhar).



## Hydraulics and Pneumatics Controls

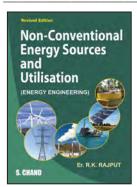
K. Shanmuga Sundaram



ISBN: 9788121926355 Code: 1010A00306 Price: ₹ 295 | Pages: 240 Size: 6.75" X 9.5" (Paperback)

## **Contents**

1. Fluid Power Fundamentals, 2. Pumps, 3. Actuators, 4. Pressure Control, 5. Direction Control Valves, 6. Flow Control Valves, 7. Fluid Conditioners, 8. Accessory Components, 9. Hydraulic Symbols—ANSI Symbols, 10. Hydraulic Circuits, 11. Design of Hydraulic Circuits, 12. Fundamentals of Pneumatics, 13. Pneumatic System Components, 14. Pneumatic Circuits, 15. Combination Circuits, 16. Logic Controls in Fluid Power Systems, 17. Maintenance and Troubleshooting in Fluid Power Systems \*Appendix\*QuestionPapers \*K\* Shanmuga Sundaram\* is Lecturer, Department of Mechanical Engineering, College of Engineering, Guindy, Anna University, Chennai.



## Non-Conventional Energy Sources and Utilization (Energy Engineering)

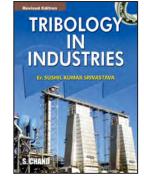
R.K. Rajput

ISBN: 9788121939713 Code: 1010B00519 Price: ₹ 525 | Pages: 464 Size: 6.75" X 9.5" (Paperback)

#### **Contents**

• Introduction to SI Units and Conversion Factors, 1. Introduction to Energy Sources, 2. Principles of Solar Radiation, 3. Solar Energy Collectors, 4. Solar Energy Storage and Applications, 5. Wind Energy, 6. Bio Energy (Energy from Biomass), 7. Geothermal Energy, 8. Ocean Energy, 9. Direct Energy Conversion, 10. Hydrogen Energy, 11. Nuclear Power Plant, 12. Steam Thermal Power Plants, 13. Diesel Engine Power Plant, 14. Gas Turbine Power Plants, 15. Hydro-Electric Power Plants, 16. Environmental Aspects of Energy Generation and Pollution Control • Section: Short Answer Questions • Index

**R K Rajput** is former principal Punjab College of Information Technology and Thapar Polytechnic College.



## Tribology in Industries

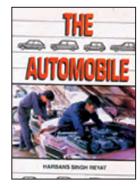
Sushil Kumar Srivastava

ISBN: 9788121920452 Code: 1010B00209 Price: ₹ 265 | Pages: 282 Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Introduction & Overview, 2. Friction, 3. Wear, 4. Lubrication, 5. Behaviour of Tribological Components, 6. Other Tribological Treatments, 7. Tribo-Technical Systems & Tribological Systems, 8. Tribological Monitoring of Equipment's Condition, 9. Tribology in Metal Working Processes, 10. Tribology in Steel Industries, 11. Tribology in Mining Industries, 12. Tribology in Paper and Pulp Industries, 13. Tribology in Glass Fiber Industry, 14. Tribology in Transport Sector (Road & Rail), 15. Tribology in Human Body & Medical Sector, 16. Few Other Tribology Areas, 17. Simple Tribological Quiz \*Bibliography\*Index

**Sushil Kumar Srivastava** is is MIE and Member-FPS. He is Director, OTMEC, Durgapur (WB). He is former GM IGSL Kolkata and Assistant GM, I/C (Mech. & Fuel). Steel Authority of India, Alloy Steels Plant, Durgapur



## The Automobile

Harbans Singh Reyat

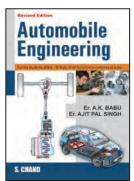
ISBN: 9788121902144 Code: 1010A00019 Price: ₹ 499 | Pages: 544 Size: 5.5" X 8.5" (Paperback)

#### **Contents**

1. The Automobile, 2. Construction and Working of Automobile, 3. Suspension System, 4. Engine – I, 5. Engine – II, 6. Engine Lubrication System, 7. Engine Cooling System, 8. Fuels and Fuel Systems, 9. Fuel Injection System, 10. Electrical Systems – I, 11. Electrical Systems – II, 12. Transmission System, 13. Clutch, 14. Transmission, 15. Drive Shaft and Drive Axle, 16. Steering System, 17. Brakes, 18. Air-Conditioning in Automobiles, 19. Maintenance of Automobile, 20. Trouble-shooting • Appendices: I to VII • Glossary of Technical Terms

## Mechanical Engineering





## Automobile Engineering

A K Babu & Ajit Pal Singh

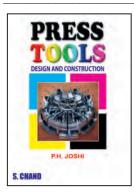
ISBN: 9788121997706 Code: 1010A00560 Price: ₹ 395 | Pages: 376 Size: 6.5" X 9.25" (Paperback)

#### **Contents**

1. Introduction, 2. Vehicle Structure, 3. Engine, 4. Fuel System, 5. Lubrication System, 6. Cooling System, 7. Electrical System, 8. Clutch, 9. Gearbox, 10. Propeller Shaft Assembly, 11. Front Axle & Steering, 12. Wheel Alignment, 13. Suspension System, 14. Brake System, 15. Wheels and Tyres, 16. Emission and Control, 17. Alternate Fuels, 18. Safety • Index

**A K Babu** is Assistant Professor (SG) School of Mechanical & Building Sciences, VIT University, Chennai Campus.

**Ajit Pal Singh** is M.E. (IIT Delhi) and Assistant Professor, Department of Production Engineering, Defence University, Ethiopia.



## Press Tools Design and Construction, 4e

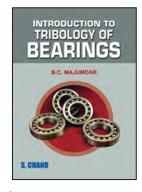
P.H. Joshi

ISBN: 9788121929387 Code: 1010A00354 Price: ₹ 450 | Pages: 414 Size: 6.75" X 9.5" (Paperback)

## **Contents**

1. Introduction, 2. Cutting Tools, 3. Bending Tools, 4. Forming Tools, 5. Drawing Tools, 6. Miscellaneous Tools, 7. Press Tool Components, 8. Versatile Combination Progressive Tools, 9. Selection of Press, 10. Computer-Aided Design of Press Tools, 11. Manufacture of Press Tools, 12. Process Planning, 13. Appendix, 14. Press Work Standards • Bibliography • Index

**P.H. Joshi,** DME, AMIE (India) has been with companies such as Crompton Greaves Ltd. and Bharat Forge Ltd. and faculty Fr. Agnel Technical College.



## Introduction to Tribology of Bearings, 2e

B.C. Majumdar

ISBN: 9788121929875 Code: 1010A00363

Price: ₹ 375 | Pages: 304 Size: 6.75" X 9.5" (Paperback)

#### **Contents**

1. Introduction, 2. Properties and Testing of Lubricants, 3. Basic Equations, 4. Idealized Hydrodynamic Bearings, 5. Finite Bearings, 6. Oil Flow and Thermal Equilibrium, 7. Bearing Design, 8. Squeeze Film Bearings, 9. Hydrodynamic Instability, 10. Externally Pressurized Oil Bearings, 11. Gas Lubricated Bearings, 12. Elastohydrodynamic Lubrication, 13. Ball Bearings, 14. Surface Roughness Effect, 15. Friction of Metals, 16. Wear of Metals • Problems • Author Index • Subject Index

**B C Majumdar** is Former Professor, Mechanical Engineering, Indian Institute of Technology, Kharagpur (IITK).



## **CHECK LIST**

# Engineering & Technology

## LOW PRICED STUDENTS' PAPERBACK EDITION

ISBN	Code		Author	Title	INR
9789355014443	9789355014443	Khurmi	i R.S. & Gupta J.K.	Civil Engineering (Conventional and Objective Type)	750
9789352533800	9789352533800	Shetty M.S. & & Jain A.K.		Concrete Technology (Theory and Practice), 8e	750
9789352837205	9789352837205	Rajput	R.K.	A Textbook of Fluid Mechanics	750
9789352837212	9789352837212	Rajput	R.K.	A Textbook of Heat and Mass Transfer, 7e	650
			CIVIL EN	IGINEERING	,
9789355016133		Er. Shr	ikrishna A. Dhale & Er. Kiran M. Tajne	S. Chand's Basics of Civil Engineering	300
9789352834051	9789352834051	Gupta :	S.K.	Engineering Thermodynamics 2e	1099
9788121905206	1010D00030	Khurmi	i R.S.	Theory of Structures (In SI Units)	840
9789384319809	1010000623	Misra,	Anil Kumar	Building Materials and Construction	365
9788121919609	1010D00210	Rajput	R.K.	Engineering Materials (Including Construction Materials)	550
9788121923538	1010C00282	Syal I.C	C. & Goel A.K.	Reinforced Concrete Structure	795
9789352533770	9789352533770	Sharma	a S.K.	Irrigation Engineering and Hydraulic Structures	975
9788121921282	1010B00240	0240 Sharma R.K. & Sharma T.K.		Irrigation Engineering (Including Hydrology)	795
9788121915472	1010D00189	Duggal	l K.N.	Elements of Environmental Engineering	495
9788121924573	1010C00301	Ramamurthy T.N. & Sitharam T.G.		Geotechnical Engineering (Soil Mechanics)	375
9788121904797	1010C00034	Sharma	a S.K.	A Textbook of Building Construction	625
9788121901277	1010A00041	Sinha N	N.C. & Roy S.K.	Fundamentals of Reinforced Concrete	1199
9788121901314	1010D00104	00104 Sharma S.K.		Principles, Practice and Design of Highway Engineering	895
9788121921954	1010B00245	Roy, Sujit Kumar & C. Subrata		Fundamentals of Structural Analysis, 2nd Edition	850
9788121923200	1010A00272	Dayaratnam P.		Design of Steel Structures	895
9788121943222	1010000613	00613 Mishra, Anil Kumar		Engineering Geology	295
9788121922302	1010B00237	37 Sharma R.K. & Sharma T.K.		A Textbook of Water Power Engineering	515
9788121917803	1010A00200	200 Alak De		Plane Surveying	650
9788121923125	1010000269	Rajase	karan S.	Numerical Methods in Science and Engineering – A Practical Approach	595
9788121903325	1010B00112	Kohli D	).D. & Kohli R.C.	A Textbook of Estimating and Costing (Civil)	525
9789358708622	9789358708622	Ommi S	Srikanth & M. Sreenivasa Reddy	Basic Civil and Mechanical Engineering	325
			MECHANICA	L ENGINEERING	
9789355014450	4010D00042		Khurmi R.S. & Gupta J.K.	Mechanical Engineering (Conventional and Objective Type)	799
9789352833979	978935283397	79	Khurmi R.S. & Khurmi N.	A Textbook of Strength of Materials (Mechanics of Solids), 26e	1050
9789352833962	978935283396	62	Khurmi R.S. & Khurmi N.	A Textbook of Engineering Mechanics (In SI Unit), 22e	895
9789352838165	978935283816	65	Gupta S.K.	A Textbook of Automobile Engineering 2e	825
9788121927819	4010B00326		Khurmi R.S. & Gupta J.K.	A Textbook of Refrigeration and AirConditioning	895
9788121928298	4010C00341		Khurmi R.S. & Gupta J.K.	Refrigeration Tables with Chart	150
9789355010544	9789355010544		Khurmi R.S. & Gupta J.K.	A Textbook of Thermal Engineering (SI Units)	595
9789355010704	978935501070	04	Rajput R.K.	A Textbook of Strength of Materials (Mechanics of Solids) (SI Units), 7e	850
9789355010780	978935501078	80	Khurmi R.S. & Gupta J.K.	Theory of Machines	450

## CHECK LIST



ISBN	Code	Author	Title	INR
9789355010834	9789355010834	Khurmi R.S. & Gupta J.K.	A Textbook of Machine Design (Multicolour Edition)	999
9789355010698	9789355010698	Sharma P.C.	A Textbook of Production Technology (Manufacturing Processes)	725
9789352837373	9789352837373	Dhawan R.K.	A Textbook of Engineering Drawing (In First Angle Projection) 3e	550
9789385401374	1010B00185	Rajput R.K.	A Textbook of Fluid Mechanics and Hydraulic Machines (In SI Units), 6th Edition	1495
9788121901628	1010B00026	Khurmi R.S. & Khurmi N.	Hydraulics, Fluid Mechanics and Hydraulic Mechanics (SI Units)	850
9788121901116	1010B00038	Sharma P.C.	A Textbook of Production Engineering	895
9789352533794	9789352533794	Telsang, T. Martand	Industrial Engineering and Production Management, 3e	950
9788121902816	1010E00087	Gupta, Prem Kumar & Hira D.S.	Operations Research	995
9789352533824	9789352533824	Mehta J.S. and Kailey A.S.	Mechanical Vibrations, 2nd Edition	415
9788121906548	1010A00044	Khurmi R.S. & Khurmi N.	Steam Tables with Mollier Diagram	110
9788121908689	6010B00155	Khurmi R.S. & Gupta J.K.	A Textbook of Workshop Technology (Manufacturing Processes)	610
9788121928595	1010D00343	Rajput R.K.	A Textbook of Mechatronics	799
9788121926447	1010C00317	Srivastava, Sushil Kumar	Maintenance Engineering (Principles, Practices and Management)	425
9788121901468	1010C00109	Khurmi R.S. & Sedha R.S.	Materials Science	425
9788121908245	1010F00148	Dhawan R.K.	A Textbook of Machine Drawing (In First Angle Projection)	910
9789385401954	1010000661	Khurmi R.S. & Khurmi N.	A Textbook of Strength of Materials (Mechanics of Solids), Concise Edition	795
9789385676314	1010C00194	Rajput R.K.	A Textbook of Hydraulic Machine (SI Units), 6th Edition	795
9789385401930	1010000659	Rajput R.K.	A Textbook of Heat and Mass Transfer (SI Units), Concise Edition	750
9789385401947	1010000660	Khurmi R.S. & Khurmi N.	Principles of Engineering Mechanics, Concise Edition	725
9789385676499	1010000667	Dhawan R.K.	A Textbook of Machine Drawing (In First Angle Projection) (Single Colour Edition)	750
9789385676482	1010000666	Kumar K. L.	Engineering Fluid Mechanics (Single Colour Edition)	650
9788121927093	1010B00318	Rajput R.K.	Engineering Materials and Metallurgy	345
9788121935876	9789355012777	Sadhu Singh	Handbook of Mechanical Engineering (Library Editions)	1995
9789385401961	1010000662	Rajput R.K.	Essentials of Strength of Materials (Mechanics of Solid), Concise Edition	995
9788121929660	1010000358	Shah P.J.	Machine Drawing	250
9788121909686	1010C00128	Gupta P.K. & Hira D.S.	Problems in Operations Research (Principles and Solutions)	995
9789383746019	1010000618	Singh V.P./ Pratap Raveesh & Akhai Shalom	Objective Type Questions in Mechanical Engineering	550
9788121916431	1010B00191	Khurmi R.S. & Khurmi N.	Applied Mechanics (SI Units)	525
9788121935920	1010000462	Dhawan R.K.	Applied Mechanics (Engineering Mechanics)	295
9788121926355	1010A00306	Sundaram, Shanmuga K.	Hydraulics and Pneumatics Controls	295
9788121939713	1010B00519	Rajput R.K.	Non-Conventional Energy Sources and Utilization (Energy Engineering)	525
9788121920452	1010B00209	Srivastava, Sushil Kumar	Tribology in Industries	265
9788121902144	1010A00019	Reyat, Harbans Singh	The Automobile	499
9788121997706	1010A00560	Babu A.K. & Singh Ajit Pal	Automobile Engineering	395
9788121929387	1010A00354	Joshi P.H.	Press Tools Design and Construction	450
9788121929875	1010A00363	Majumdar B.C.	Introduction to Tribology of Bearings	375
9789352718887	9789352718887	Kaushik Kumar Apurba Kumar Roy & Chikesh Ranjan	Engineering Graphics	295
9789352835072	9789352835072	Dr. Ramana Pilla, Dr. M Surya Kalavathi & Dr. G T Chandra Sekhar	Basic Electrical Engineering	450
9789352835287	9789352835287	Dr. Ramana Pilla Dr. H D Mehta	Basic Electrical Engineering	495
9788121932356	9788121932356	Prof. P. J. Shah	Engineering Graphics	420



## **CHECK LIST**

# Engineering & Technology

Library Editions  Mechanical Engineering								
Print On Demand								
9788121920728	1010B00207	Chandola S.P.	A Textbook of Transportation Engineering					
9788121905206	1010D00030	Khurmi R.S.	Theory of Structures (In SI Units)					
9788121923149	1010B00270	Rajasekaran S.	Finite Element Analysis in Engineering Design					
9788121905008	1010C00135	Vazirani V.N. & Chandola S.P.	Concise Handbook of Civil Engineering					
9788121908313	1010A00141	Bhattacharya S.N.	Installation Servicing and Maintenance					
9788121914314	1010C00147	Dhawan R.K.	A Textbook of Engineering Drawing (In First Angle Projection) only e-book available					
9788121939645	1010000522	Dutta S.K. & Lele A.B.	Metallurgical Thermodynamics Kinetics and Numericals					
9788121940580	1010000542	Dutta, Sujay Kumar & Sah Ramesh- war	Alternate Methods of Ironmaking					
9788121935715	1010B00455	Veluswami M.A.	S. Chand's Engineering Mechanics with Vector Approach					
9789352718856	9789352718856	Dr. T Jeyapoovan	Engineering Graphics and Design					
9788121916677	1010C00192	Rajput R.K.	A Textbook of Fluid Mechanics (Multicolour Edition)					

Available on print on Demand, the MRP & Discount will be provided basis the quantity

## S. CHAND PUBLISHING (SINCE 1939)

Customer Care (toll free) No.: 1800-103-1926

WhatsApp: +91-7291975264

e-mail: info@schandpublishing.com

## FOR FURTHER INFORMATION, PLEASE CONTACT OUR NEAREST BRANCH OFFICE

## NORTHERN REGION

## **DELHI NCR, WESTERN U.P.**

## **NOIDA**

Head Office: D-92, Sector-02, Noida 201301

Uttar Pradesh (India) Ph: +91-120-4682700

e-mail: info@schandpublishing.com

## **SAHIBABAD WAREHOUSE**

Plot No. 40/2A Site-IV, Sahibabad Industrial Area,

Ghaziabad- 201010, Uttar Pradesh Ph: 0120-4176248 / 4261379

## **EASTERN U.P. & MADHYA PRADESH**

#### **LUCKNOW**

Surajdeep Complex, A-Block, Second Floor 1, Jopling Road, Lucknow-226001, Uttar Pradesh

Ph: 0522-4003 633

e-mail: lucknow@schandpublishing.com

## PUNJAB, HARYANA, HIMACHAL PRADESH, RAJASTHAN AND JAMMU & KASHMIR

## **JALANDHAR**

112, 2nd Floor, Shree Kuber Complex, Ranjit Nagar Opp. Bus Stand Jalandhar-144001, Punjab

Ph: 0181-4645 630

e-mail: jalandhar@schandpublishing.com

## **SOUTHERN REGION**

## **TELANGANA & ANDHRA PRADESH**

## **HYDERABAD**

301, 301/A 3rd Floor, Legend Blue Hope Municipal No-4-1-875, 876, 877 and 877/1 Off. Abids, Tilak Road, Hyderabad-500001

Ph: 040-4018 6018

e-mail: hyderabad@schandpublishing.com

## TAMIL NADU, KARNATAKA & KERALA

## **CHENNAI**

No. 3, 2nd Floor, 13th Street, Jai Nagar, Arumbakkam (Opp. to CMBT Bus Stand and Behind Park) Chennai-600106,

Tamil Nadu Ph: 044-2363 2120

e-mail: chennai@schandpublishing.com

## **WESTERN REGION**

## MAHARASHTRA, GOA & GUJARAT

### **MUMBAI**

Office No. 609, 6th Floor, B Wing, Damji Shamji Corporate Square Next to Canara Business Centre, Ghatkopar, Andheri Link Road, Pant Nagar, Ghatkopar East, Mumbai-400075, Maharashtra

Ph: 022-2500 0297

e-mail: mumbai@schandpublishing.com

## **EASTERN REGION**

## NORTH EAST, WEST BENGAL AND ORISHA

#### **KOLKATA**

Unit No. F01, CFB Building, 1st Floor, LB-1, Shilpangan, Sector-III, Salt Lake, Near Jadavpur University 2nd Campus, West Bengal-700098, Kolkata Ph: 033-2335 7458, 23353914 e-mail: kolkata@schandpublishing.com

## ASSAM, MEGHALAYA, NAGALAND, MIZORAM ARUNACHAL PRADESH, MANIPUR & TRIPURA

## **GUWAHATI**

4, Nirmali, Kanaklata Path, Lachit Nagar, Bharalupar, (Opp. EPFO Office) Guwahati, Assam–781007 Ph: 0361-4066 369 e-mail: guwahati@schandpublishing.com

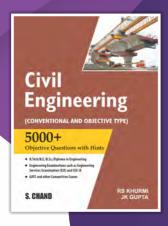
## **BIHAR & JHARKHAND**

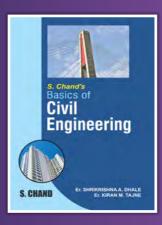
## **PATNA**

Satya Shree, Boring Patliputra Road, PS-Sri Krishnapuri Town Opp. CISF Office, Patna-800013, Bihar

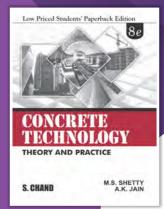
Ph: 061 2226 0011

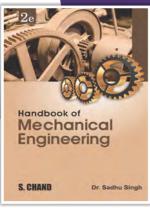
e-mail: patna@schandpublishing.com





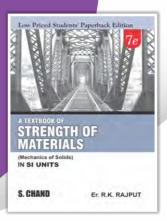














## S. CHAND PUBLISHING

(A Division of S Chand And Company Limited)
(ISO 9001 Certified Company)

Head Office: D-92, Sector-2, Noida 201301, U.P. (India)

Ph: +91-120-4682700

Customer Care (Toll Free) No.: 1800 103 1926



facebook.com/Schandpublishinghighereducation/



instagram.com/schandhighereducation/



+91-7291975264



linkedin.com/company/schand-higher/



twitter.com/SChandHigher/



info@schandpublishing.com

