Nirali Prakashan Engineering Books Free

This book is aimed at developing the elementary analysis skills, familiarity and intuitive feel for composite construction that is required by undergraduate and graduate students, and by structural engineers. It does not require a prior knowledge of advanced analysis and design techniques, but builds on simple concepts such as statics and the mechanics of materials. A topic is first introduced by a brief description, with numerous carefully-chosen examples forming an integral part of the main text. Working through the examples allows the reader to gain a full understanding of the subject, as a technique is illustrated by its application to the design of new structures, or the important area of assessing and upgrading existing structures. The techniques described for the analysis of standard structures form a basis for understanding the way composite structures work, and these techniques are applied to many non-standard forms of composite construction that are rarely covered in national standards, if at all. The book is an essential purchase for all undergraduate and postgraduate students of structural and civil engineering, as well as all practitioners.

Containing over one hundred and sixty line drawings, maps and one hundred tables, this book explains the fundamental hydrologic principles and favoured methods of analysis. Aimed at students interested in natural resources and environmental science, spreadsheet exercises and worked examples help to develop basic problem solving

skills.

Introduction - Conduction - Convection - Radiation - Heat Exchange Equipments - Evaporation - Diffusion - Distillation - Gas Absorption - Liquid Liquid Extraction - Crystallisation - Drying - Appendix I Try yourself - Appendix II Thermal conductivity data - Appendix III Steam tables

While writing the book,we have continuously kept in mind the examination requirments of the students preparing for U.P.S.C.(Engg. Services)and A.M.I.E.(I)examinations.In order to make this volume more useful for them,complete solutions of their examination papers up to 1975 have also been included.Every care has been taken to make this treatise as self-explanatory as possible.The subject matter has been amply illustrated by incorporating a good number of solved,unsolved and well graded examples of almost every variety.

1 Non- Traditional Machining 2 Introduction to CNC 3 Other Machining Methods 4 Milling And Gear Cutting 5 Surface Finishing 6 Maintenance of Machine Tools

Learn Basic Theory and Software Usage from a Single Volume Finite Element Modeling and Simulation with ANSYS Workbench combines finite element theory with real-world practice. Providing an introduction to finite element modeling and analysis for those with no prior experience, and written by authors with a combined experience of 30 years teaching the subject, this text presents FEM formulations integrated with relevant hands-on applications using ANSYS Workbench for finite element analysis

(FEA). Incorporating the basic theories of FEA and the use of ANSYS Workbench in the modeling and simulation of engineering problems, the book also establishes the FEM method as a powerful numerical tool in engineering design and analysis. Include FEA in Your Design and Analysis of Structures Using ANSYS Workbench The authors reveal the basic concepts in FEA using simple mechanics problems as examples, and provide a clear understanding of FEA principles, element behaviors, and solution procedures. They emphasize correct usage of FEA software, and techniques in FEA modeling and simulation. The material in the book discusses one-dimensional bar and beam elements, two-dimensional plane stress and plane strain elements, plate and shell elements, and three-dimensional solid elements in the analyses of structural stresses, vibrations and dynamics, thermal responses, fluid flows, optimizations, and failures. Contained in 12 chapters, the text introduces ANSYS Workbench through detailed examples and hands-on case studies, and includes homework problems and projects using ANSYS Workbench software that are provided at the end of each chapter. Covers solid mechanics and thermal/fluid FEA Contains ANSYS Workbench geometry input files for examples and case studies Includes two chapters devoted to modeling and solution techniques, design optimization, fatigue, and buckling failure analysis Provides modeling tips in case studies to provide readers an immediate opportunity to apply the skills they learn in a problem-solving context Finite Element Modeling and Simulation with ANSYS Workbench benefits upper-level undergraduate students in all

engineering disciplines, as well as researchers and practicing engineers who use the finite element method to analyze structures.

1 Elementary Concepts 2 Magnetic Circuits 3 Electromagnetic Induction 4 Single Phase Transformers 5 Electrostatistics 6 A C fundamentals 7 Single Phase A C circuits 8 Three Phase A C Circuits 9 D C Circuits Appendix

Unit I Laws of thermodynamics Unit II Entropy and ideal gas Unit IIIThermodynamic cycles and availability Unit IV Properties of pure substances and thermodynamic vapour cycle Unit V Steam Generators Unit VI Psychrometry

The key areas of life cycle cost analysis (LCCA) and whole life costing (WLC) are exemplified in this volume with accounts of their application to housing stock, a community hydroelectric power system, various aspects of highway infrastructure, and corrosion protective coatings. Sustainable construction and design requires more than compliance with safety requirements and economic constraints; there is also the impact on the environment, the surrounding population, and users of the infrastructure. This requires a multidimensional perspective of sustainability to be considered in life cycle costing (LCC) combining current design criteria with these other aspects. It has become increasingly important to understand the full costs of civil engineering infrastructure, and the main sources of cost, along the whole supply chain and to identify cost reduction opportunities. The conventional procurement approach without the integration of probabilistic life cycle cost modelling induces substantial long-term maintenance

costs. Once deterioration and life cycle cost models have been established, appropriate partnership procurement strategies, associated financing methods, and determination of the project period can be developed. LCC includes the cost of planning, design, acquisition, operation, maintenance, and disposal of buildings and other construction assets, while WLC additionally includes incomes and other costs such as non-construction costs and externalities. In whole life costing, social, environmental, or business costs or benefits are considered as externalities and care must be taken not to double count the impacts when WLC is used together with LCCA. The international examples included in this book illustrate practically the methodology of life cycle costing and the application of life cycle cost analysis to identify the most appropriate method for assessing the relative merits of competing project implementation alternatives.

Unit I Structure of metals and materials Unit II Mechanical behaviours of metal and materials Unit III Destructive and non destructive testing Unit IV metals corrosions and its prevention Unit V Surface Modification methods Unit VI Powder metallurgical technology

*Exploits the finer points of core and standard editions of Java 2 *Updated to include the final Java 2SE 5.0 (Tiger) release * *Ideal for experienced non-Java and Java programmers who need intermediate level book

This thorough and comprehensive textbook on machine elements presents the concepts, procedures, data, tools, and techniques students need to design safe,

efficient and workable mechanical components of machines. Covering both the conventional design methodology and the new tools such as CAD, optimization and FEM, design procedures for the most frequently encountered mechanical elements have been explained in meticulous detail. The text features an abundance of thoroughly worked-out examples, end-of-chapter questions and exercises, and multiple-choice questions, framed to not only enhance students' learning but also hone their design skills. Well-written and eminently readable, the text is admirably suited to the needs of undergraduate students in mechanical, production and industrial engineering disciplines.

This book aims at providing a complete coverage of the needs of First Year students as per S.B.T.E's. revised syllabus. The entire revised syllabus has been covered keeping in view the non-availability of the complete subject matter through a single source. The difficult articles have been explained in a simple language providing, wherever necessary, neat and well explained diagrams so that even an average student may be able to follow it independently. A sufficient number of solved examples and problems with answers and SBTE questions are given at the end of each topic. Formulae specifying symbol meaning are enlisted before solving the examples.

Introduction - Flow of Fluids - Heat Transfer - Mass Transfer - Size Reduction - Size Separation - Filtration - Mixing - Extraction - Crystallization - Evaporation - Drying - Distillation - Pumps - Transportation of Solids - Corrosion - Fire Hazards - Pollution

From Pharmaceutical Industry - Conversion Tables - Index

Mass Transfer-IINirali PrakashanBASIC ELECTRICAL ENGINEERING

Magement functions are essential parts of the industry. Similarly this subject is an essential input for diploma engineering students. It is applicable to all branches with no exception. The concept of magement and its industrial application will definitely add magerial angle making students techno-commercial professiols. This book is intended for giving such input to all the fil year diploma engineering students.

1 Basic Concepts of Structural Analysis 2 Slope And Deflection of Beams 3 Deflection of Beams And frames 4 Indeterminate Beams 5 Energy Method For Displacement 6 Deflection of Trusses 7 Indeterminate Trusses 8 Influence Lines 9 Influence Line Diagrams for Plane 10 Three-Hinged Arches 11 Two-Hinged Arches 12 Plastic Theory 13 Plastics Analysis

In the present edition,authors have made sincere efforts to make the book up-to-date.A noteable feature is the inclusion of two chapters on Power System.It is hoped that this edition will serve the readers in a more useful way.

1 Building Construction and Materials 2 Construction planning & management 3 Strength of materials 4 Structural analysis 5 Concrete structure 6 steel structure 7 Soil mechanics 8 Foundation engineering 9 Fluid mechanics & hydraulics 10 Hydrology engineering 11 Irrigation engineering 12 Water supply engineering 13 Solid waste and sanitary engineering 14 highway engineering 15 surveying Model Question Paper