

Anna University 1st Semester Engineering Mechanics

Circuit Theory High Performance Concrete Digital Principles & System Design A Textbook of Engineering Mathematics (For First Year ,Anna University) Textbook Of Engineering Chemistry English for Engineers and Technologist. Vol.2 Engineering Mathematics Engineering Physics (for Anna University), 1/e Engineering Drawing And Graphics + Autocad Engineering Chemistry-I (For 2nd Semester of Anna University) Engineering Mechanics Variational Analysis and Aerospace Engineering Engineering Graphics (anna University) A Textbook of Engineering Physics, Volume-I (For 1st Year of Anna University) Basics Of Electronics Engineering Computer Organization And Architecture High Voltage Engineering Software Engineering University of Michigan Official Publication Basic Civil and Mechanical Engineering Software Engineering And Quality Assurance Digital Computer Fundamentals Indian National Bibliography Electrical Circuits and Elecron Devices Basics Of Electrical And Electronics Engineering Electrical Engineering and Control Systems Human Values and Professional Ethics Engineering Chemistry-I (Anna University) Data Structures and Algorithms The Hindu Index Engineering Physics - I: For Anna University Electronic Circuits - I Microgrids Engineering Mathematics - 1 | Fourth Edition | For Anna University | By Pearson The Indian National Bibliography Engineering Chemistry Engineering Physics (Annual Pattern) Food Packaging Directory of Engineering Education Institutions Fundamentals Of Programming

Circuit Theory

The course contents of the third edition of this book entitled 'Engineering Mechanics' are planned in such a way that the book covers the complete course of first year students of all disciplines of Anna University, Tamil Nadu according to the revised syllabus on annual pattern.

High Performance Concrete

Digital Principles & System Design

The Seventh Edition Of This Book Is Thoroughly Revised And Enlarged And Is Specifically Tailored To Meet The Revised Syllabus, Offered In The First Year Of B.E./B.Tech. Of All The Branches In Various Engineering Colleges Affiliated To Anna University, Tamil Nadu. Salient Features:- * It Is User-Friendly With Step-By-Step Procedures. * Each Solved Problem Is Graded And Is Followed By Similar Exercise Problem For Students To Practice Confidently And Grasp The Fundamental Principles Much Easily. * Additional Problems Are Also Added In Each Chapter. * An Excellent Guide For An Average Student Highlighting The Important Points, Notes, Rules, Hints, To Remember, Etc. * Illustrated With 800 Solved University Problems With Illustrations, It Is Examination Oriented.

A Textbook of Engineering Mathematics (For First Year ,Anna

University)

Food Packaging: Advanced Materials, Technologies, and Innovations is a one-stop reference for packaging materials researchers working across various industries. With chapters written by leading international researchers from industry, academia, government, and private research institutions, this book offers a broad view of important developments in food packaging. Presents an extensive survey of food packaging materials and modern technologies Demonstrates the potential of various materials for use in demanding applications Discusses the use of polymers, composites, nanotechnology, hybrid materials, coatings, wood-based, and other materials in packaging Describes biodegradable packaging, antimicrobial studies, and environmental issues related to packaging materials Offers current status, trends, opportunities, and future directions Aimed at advanced students, research scholars, and professionals in food packaging development, this application-oriented book will help expand the reader's knowledge of advanced materials and their use of innovation in food packaging.

Textbook Of Engineering Chemistry

This book is designed for course on Basic Civil and Mechanical Engineering. The book closely follows the undergraduate engineering syllabus. The text has been infused with several short answer questions, fill in the blanks and true or false statements which will provide competitive edge to students and prove instrumental in preparation of competitive and university examinations.

English for Engineers and Technologist. Vol.2

Engineering Matematics

Engineering Physics(for Anna University),1/e

Engineering Drawing And Graphics + Autocad

Engineering Chemistry-I (For 2nd Semester of Anna University)

Computer Basics Evolution of computers, Generations of computers, Classification of computers, Applications of computers, Computer components of a computer system, Hardware, Software booting. Software, Programming and Internet Problem solving techniques, Program control structures, Programming paradigms, Programming languages, Generations of programming languages, Language translators, Features of programming language, Internet, Evolution, Basic Internet terms, Getting connected to Internet-Applications. C Fundamentals Introduction to C, Constants, Variables, Data types, Operators and expressions, Managing input and output operations, Decision making and branching, Looping. Arrays and Functions Arrays, Character arrays and strings, User defined functions, Storage

classes. Structures and Files Structures, Definition, Initialization, Array of structures, Structures within structures, Structures and functions, Unions, File management in C.

Engineering Mechanics

Variational Analysis and Aerospace Engineering

Transistor Biasing BJT - Need for biasing-Fixed bias circuit, Load line and quiescent point. Variation of quiescent point due to h variation within manufacturers tolerance. Stability factors. Different types of biasing circuits. Method of stabilizing the Q point to the extent possible. Advantage of self bias (voltage divider bias) over other types of biasing. Use of self bias circuit as a constant current circuit. Source self bias and voltage divider bias for FET. Use of JFET as a voltage variable resistor.

Engineering Graphics (anna University)

Professional ethics encompass the personal, organizational and corporate standards of behaviour expected of professionals

A Textbook of Engineering Physics, Volume-I (For 1st Year of Anna University)

English for Engineers & Technologists is in two volumes and has been written by teachers. It has been produced by the Department of Humanities and Social Sciences, Anna University and is a British Council-aided project. The writing of the book was supervised by three specialists from the Ealing College of Higher Education, London. The contents of the books are based on eight real-life topics which are interesting and relevant to engineering/technical students. Each unit is in turn divided into three sub-topics (eg. the Resources unit has water, gold and human resources). The exercises in each of the lesson units are aimed at developing in the students, skills in listening, discussion, reading, writing and presentation.

Basics Of Electronics Engineering

Introduction to Semiconductors and Diodes Introduction : Semiconductors N-type and P-type Majority and Minority carriers PN Junction characteristics Type and applications Power supplies Rectifier Filters Voltage multiplier Zener regulators. Transistors-Introduction to Small Signal Amplifier Amplification Transistor characteristic curve Transistor Types Transistor as switch Measuring gain Common emitter amplifier Stabilizing the amplifier Other configurations. Large Signal Amplification - Oscillators Basic features Amplifier classification Class A, B, AB, C and switched mode Amplifiers Oscillators RC, LC, Crystal and Relaxation oscillators SCR. Digital Logic and Combinational Circuits Binary Number System and Codes Basic logic gates and truth tables Boolean algebra and DeMorgan's theorem Logic circuits Sum of product methods Product of sum method Simple design of

combinational logic networks Digital arithmetic Addition, Subtraction, Multiplication and Division of binary numbers. Sequential Logic Circuits Flip Flops SR Flip Flop, Clocked SR, Master Slave, SR, JK Flip Flop D Flip Flop Registers Types of registers Counters Synchronous and Asynchronous counters BCD Decade counter.

Computer Organization And Architecture

Electrical Circuits and Measurements Ohm's law, Kirchoff's laws, Steady state solution of DC circuits, Introduction to AC circuits, Waveforms and RMS value, Power and power factor, Single phase and three phase balanced circuits. Operating principles of moving coil and moving iron instruments (Ammeters and voltmeters), Dynamometer type watt meters and energy meters. Electrical Machines Construction, Principle of operation, Basic equations and applications of DC generators, DC motors, Single phase transformer, Induction motors and stepper motors. Semiconductor Devices and Applications Characteristics of PN junction diode, Zener effect, Zener diode and its characteristics, Half wave and full wave rectifiers, Voltage regulation. Bipolar junction transistor, CB, CE, CC configurations and characteristics, Necessity of biasing, Principles of biasing circuits, Elementary treatment of small signal amplifier. Characteristics and simple applications of SCR, DIAC, TRIAC and UJT. Digital Electronics Binary number system, Logic gates, Boolean algebra, Half and full adders, Flip-flops, Registers and counters, A/D and D/A conversions. Fundamentals of Communication Engineering Types of signals : Analog and digital signals - Modulation and demodulation : Principles of amplitude and frequency modulations. Communication systems : Radio, TV, Fax, Microwave, Satellite and optical fibre.

High Voltage Engineering

Engineering Chemistry-I serves as a textbook for the first semester course for I year BE/B. Tech students of Anna University, Chennai The book is informative and exhaustive to meet the requirements of students who aim to assimilate authentic knowledge for use during engineering course as well as in their careers. The theoretical portions have been explained in simple language, clear style with lot of solved problems and illustrated diagrams. Academic and industrial communities will find this book a valuable resource. KEY FEATURES • Specifically designed for I year B.E. students of colleges affiliated to Anna University, Chennai. • The chapters are presented in simple language. • Suitable diagrams for clear understanding of the concepts. • The recent developments in the respective fields are included in all the chapters. • Comparative tables are presented where ever two similar concepts arise. • Many solved problems. • Review questions from previous Anna University examinations at the end of each chapter.

Software Engineering

University of Michigan Official Publication

Electric Circuits Basics of electricity, Electric energy and power, Circuit elements and sources, Kirchoff's laws, Series and parallel combination of resistances, Mesh

analysis, Nodal analysis, Superposition theorem, Thevenin's theorem, Norton's theorem, Maximum power transfer theorem. Steady State Analysis of Sinusoidal Excitation Sinusoidal excitation, RMS, Average, Peak values, Phasor representation, RC, RL and RLC circuits, Complex power, Resonance, Three phase circuits, Line and phase values. D.C. Machines and Transformer D.C. machines, Constructional features, E.M.F. and torque, Circuit model, Characteristics of D.C. motors, Speed control, Transformers, Constructional features, Transformer operation, Voltage regulation, Efficiency. A.C. Machines Alternators, Principles of operations, Synchronous machines, Circuit model, Armature leakage reactance, Synchronous reactance, Voltage regulation, Induction machines, Construction, Circuit model, Power across airgap, Torque and power output, Torque - Slip characteristics, Starting arrangement, Speed control of induction motor, Single phase induction motors, A.C. series motor. Control Systems Control systems, Closed loop control, Example, Mathematical models of simple physical systems, Transfer function, Control components, D.C and A.C. servo motors, Potentiometers, Stepper motors, Time response of first and second order systems.

Basic Civil and Mechanical Engineering

Software Engineering And Quality Assurance

This Book Provides A Systematic Account Of The Basic Principles Involved In Engineering Drawing. The Treatment Is Based On The First Angle Projection. Salient Features: * Nomography Explained In Detail. * 555 Self-Explanatory Solved University Problems. * Step-By-Step Procedures. * Side-By-Side Simplified Drawings. * Adopts B.I.S. And I.S.O. Standards. * 1200 Questions Included For Self Test. The Book Would Serve As An Excellent Text For B.E., B. Tech., B.Sc. (Ap. Science) Degree And Diploma Students Of Engineering. Amie Students Would Also Find It Extremely Useful.

Digital Computer Fundamentals

A Textbook of Engineering Physics

Indian National Bibliography

Digital Concepts Digital computer fundamentals, Block diagram of a computer, Components of a computer system, Digital and analog quantities, Binary digits, Logic levels, Digital waveforms, Basic logic operations, Digital integrated circuits. Number Systems Number representation, Decimal, Binary, Octal, Hexadecimal and BCD numbers, Binary arithmetic, Binary addition, Unsigned and signed numbers, One's and two's complements of binary numbers, Arithmetic operations with signed numbers, Number system conversions, Digital codes. Boolean Algebra and Logic Simplification Logic gates, AND, OR, NOT, NAND, NOR, XOR and XNOR, Laws and rules of Boolean algebra, DeMorgan's theorems, Standard forms of Boolean expressions, Sum of products, Product of sums, Boolean expression and truth tables, Boolean expression minimization using Boolean laws, The Karnaugh map, Sum of products and products of sum minimization. Hardware

and Software Processing devices, Memory devices, Input and output devices, Optical input devices, Audiovisual input devices, Monitors, Printing devices, Storage devices, Magnetic and optical storage devices, System software, Application software, Graphics and multimedia. Networking Fundamentals Data communication with standard telephone lines, Modems, Digital data connections, Broadband connections, DSL technologies, Cable modem connections, Computer networking basics, Common types of networks, Structuring of networks, Network media and hardware.

Electrical Circuits and Elecron Devices

Any good text book, particularly that in the fast changing fields such as engineering & technology, is not only expected to cater to the current curricular requirements of various institutions but also should provide a glimpse towards the latest developments in the concerned subject and the relevant disciplines. It should guide the periodic review and updating of the curriculum.

Basics Of Electrical And Electronics Engineering

Written in lucid language, the book offers a detailed treatment of fundamental concepts of chemistry and its engineering applications.

Electrical Engineering and Control Systems

Circuit Analysis Ohm's law, Kirchhoff's laws, D.C. and A.C. circuits, Resistors in series and parallel circuits, Mesh current and node voltage method of analysis for both circuits. Network Theorems for D.C. and A.C. Circuits Thevenin's and Norton's theorem, Super position theorem, Maximum power transfer theorem, Reciprocity theorem. Resonance and Coupled Circuits Series and parallel Resonance, Their frequency response, Quality factor and bandwidth, Self and mutual inductance, Coefficient of coupling, Tuned circuits, Single tuned circuits. Transient for D.C. Circuits Transient response of RL, RC and RLC circuits using Laplace transform for D.C. input. Duality and Topology Concept of duality, Dual network, Graphs of a network, Trees, Chords and branches, Tieset and cutset of a graph, Application to network analysis.

Human Values and Professional Ethics

Engineering Physics I: For Anna University is designed to cater to the needs of the first-year undergraduate engineering students of Anna University. Written in a lucid style, this book assimilates the best principles of conceptual pedagogy, dealing at length with various topics such as Ultrasonics, Lasers, Fibre Optics, Quantum Physics and Crystal Physics.

Engineering Chemistry-I (Anna University)

The Variational Analysis and Aerospace Engineering conference held in Erice, Italy in September 2007 at International School of Mathematics, Guido Stampacchia provided a platform for aerospace engineers and mathematicians to discuss the

problems requiring an extensive application of mathematics. This work contains papers presented at the workshop.

Data Structures and Algorithms

The Hindu Index

A complete review of the fast-developing topic of high performance concrete (HPC) by one of the leading researchers in the field. It covers all aspects of HPC from materials, properties and technology, to construction and testing. The book will be valuable for all concrete technologists and construction engineers wishing to take advantage of the re

Engineering Physics - I: For Anna University

Electronic Circuits - I

Inspired by a new revival of worldwide interest in extra-high-voltage (EHV) and ultra-high-voltage (UHV) transmission, High Voltage Engineering merges the latest research with the extensive experience of the best in the field to deliver a comprehensive treatment of electrical insulation systems for the next generation of utility engineers and electric power professionals. The book offers extensive coverage of the physical basis of high-voltage engineering, from insulation stress and strength to lightning attachment and protection and beyond. Presenting information critical to the design, selection, testing, maintenance, and operation of a myriad of high-voltage power equipment, this must-have text: Discusses power system overvoltages, electric field calculation, and statistical analysis of ionization and breakdown phenomena essential for proper planning and interpretation of high-voltage tests Considers the breakdown of gases (SF₆), liquids (insulating oil), solids, and composite materials, as well as the breakdown characteristics of long air gaps Describes insulation systems currently used in high-voltage engineering, including air insulation and insulators in overhead power transmission lines, gas-insulated substation (GIS) and cables, oil-paper insulation in power transformers, paper-oil insulation in high-voltage cables, and polymer insulation in cables Examines contemporary practices in insulation coordination in association with the International Electrotechnical Commission (IEC) definition and the latest standards Explores high-voltage testing and measuring techniques, from generation of test voltages to digital measuring methods With an emphasis on handling practical situations encountered in the operation of high-voltage power equipment, High Voltage Engineering provides readers with a detailed, real-world understanding of electrical insulation systems, including the various factors affecting—and the actual means of evaluating—insulation performance and their application in the establishment of technical specifications.

Microgrids

Engineering Mathematics - 1 | Fourth Edition | For Anna University | By Pearson

Microgrids offers a complete discussion and details about microgrids and their applications, including modeling of AC/DC and hybrid grids in a tied mode with simulation for the solar systems, wind turbines, biomass and fuel cells, and deployment issues. The data communications and control mechanism implementations are analyzed for proper coordination of the AC/DC microgrid. The various real-time applications and future development of the microgrid are also discussed in this book, with MATLAB®-based simulations and results. This book: Discusses the fundamentals of microgrids, the components of microgrids, the modeling of renewable energy sources, and the implementation of microgrids. Explores AC and DC microgrid modeling with real-time examples. Examines the effective extraction of energy from renewable energy sources. Covers analysis of data communications and control-mechanism implementations. Includes HOMER/MATLAB®-based simulations and results on microgrids. This book would be a welcome addition to the libraries of researchers, senior undergraduate students, and graduate students in power and electrical engineering, especially those working with smart and microgrids.

The Indian National Bibliography

Engineering Mathematics, 4e, is designed for the first semester undergraduate students of B.E/ B. Tech courses. In their trademark student friendly style, the authors have endeavored to provide an in-depth understanding of the concepts. Supported by a variety of solved examples, with reference to appropriate engineering applications, the book delves into the fundamental and theoretical concepts of Differential Calculus, Functions of several variables, Integral Calculus, Multiple Integrals, and Differential equations. Features: -450+ solved examples -450+ exercises with answers -250+ Part A questions with answers -Plenty of hints for problems -Includes a free book containing FAQs Table of Contents: Preface About the Authors Chapter 1) Differential Calculus Chapter 2) Functions of Several Variables Chapter 3) Integral Calculus Chapter 4) Multiple Integrals Chapter 5) Differential Equations

Engineering Chemistry

Data Structures Abstract data types - Sequences as value definitions - Data types in C - Pointers in C - Data structures and C - Arrays in C - Array as ADT - One dimensional array - Implementing one dimensional array - Array as parameters - Two dimensional array - Structures in C - Implementing structures - Unions in C - Implementation of unions - Structure parameters - Allocation of storage and scope of variables. Recursive definition and processes: Factorial function - Fibonacci sequence - Recursion in C - Efficiency of recursion. Stack, Queue and Linked List Stack definition and examples - Primitive operations - Example - Representing stacks in C - Push and pop operation implementation. Queue as ADT - C implementation of queues - Insert operation - Priority queue - Array implementation of priority queue. Inserting and removing nodes from a list-linked implementation of stack, queue and priority queue - Other list structures - Circular

lists: Stack and queue as circular list - Primitive operations on circular lists. Header nodes - Doubly linked lists - Addition of long positive integers on circular and doubly linked list. Trees Binary trees: Operations on binary trees - Applications of binary trees - Binary tree representation - Node representation of binary trees - Implicit array representation of binary tree - Binary tree traversal in C - Threaded binary tree - Representing list as binary tree - Finding the Kth element - Deleting an element. Trees and their applications: C representation of trees - Tree traversals - Evaluating an expression tree - Constructing a tree. Sorting and Searching General background of sorting: Efficiency considerations, Notations, Efficiency of sorting. Exchange sorts: Bubble sort; Quick sort; Selection sort; Binary tree sort; Heap sort. Heap as a priority queue - Sorting using a heap - heap sort procedure - Insertion sorts: Simple insertion - Shell sort - Address calculation sort - Merge sort - Radix sort. Sequential search: Indexed sequential search - Binary search - Interpolation search. Graphs Application of graph - C representation of graphs - Transitive closure - Warshall's algorithm - Shortest path algorithm - Linked representation of graphs - Dijkstra's algorithm - Graph traversal - Traversal methods for graphs - Spanning forests - Undirected graph and their traversals - Depth first traversal - Application of depth first traversal - Efficiency of depth first traversal - Breadth first traversal - Minimum spanning tree - Kruskal's algorithm - Round robin algorithm.

Engineering Physics (Annual Pattern)

Software Engineering The evolving role of software, Changing nature of software, Software myths. A Generic View of Process Software engineering - A layered technology, A process framework, The Capability Maturity Model Integration (CMMI), Process patterns, Process assessment, Personal and team process models. Process Models The waterfall model, Incremental process models, Evolutionary process models, The unified process. Software Requirements Functional and non-functional requirements, User requirements, System requirements, Interface specification, The software requirements document. Requirements Engineering Process Feasibility studies, Requirements elicitation and analysis, Requirements validation, Requirements management. System Models Context models, Behavioral models, Data models, Object models, Structured methods. Design Engineering Design process and design quality, Design concepts, The design model. Creating an Architectural Design Software architecture, Data design, Architectural styles and patterns, Architectural design. Object-Oriented Design Objects and object classes, An object-oriented design process, Design evolution. Performing User Interface Design Golden rules, User interface analysis and design, Interface analysis, Interface design steps, Design evaluation. Testing Strategies A strategic approach to software testing, Test strategies for conventional software, Black-box and White-box testing, Validation testing, System testing, The art of debugging. Product Metrics Software quality, Metrics for analysis model, Metrics for design model, Metrics for source code, Metrics for testing, Metrics for maintenance. Metrics for Process and Products Software measurement, Metrics for software quality. Risk Management Reactive Vs proactive risk strategies, Software risks, Risk identification, Risk projection, Risk refinement, RMMM, RMMM plan. Quality Management Quality concepts, Software quality assurance, Software reviews, Formal technical reviews, Statistical software quality assurance, Software

reliability, The ISO 9000 quality standards.

Food Packaging

Dr. Arun Luiz T is currently working as Assistant Professor at SSN College of Engineering, Kalavakkam. He completed his Master in science from St. Mary's College (University of Calicut), Sulthan Bathery, Kerala in 2002. He Stood First in his College for B.sc and M.sc. (Chemistry). He received his Ph. D. in Inorganic Chemistry from IIT Madras in the year 2010. His research interest includes phosphorus- based ligands in synthetic inorganic chemistry and organometallic chemistry. He has Published four research papers in reputed national and international journals. He has more than four years of teaching experience in various engineering colleges.

Directory of Engineering Education Institutions

Fundamentals Of Programming

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