

Basic Electrical Engineering P S Dhogal

This book presents comprehensive coverage of all the basic concepts in electrical engineering. It is designed for undergraduate students of almost all branches of engineering for an introductory course in essentials of electrical engineering. This book explains in detail the properties of different electric circuit elements, such as resistors, inductors and capacitors. The fundamental concepts of dc circuit laws, such as Kirchhoff's current and voltage laws, and various network theorems, such as Thevenin's theorem, Norton's theorem, superposition theorem, maximum power transfer theorem, reciprocity theorem and Millman's theorem are thoroughly discussed. The book also presents the analysis of ac circuits, and discusses transient analysis due to switch operations in ac and dc circuits as well as analysis of three-phase circuits. It describes series and parallel RLC circuits, magnetic circuits, and the working principle of different kinds of transformers. In addition, the book explains the principle of energy conversion, the operating characteristics of dc machines, three-phase induction machines and synchronous machines as well as single-phase motors. Finally, the book includes a discussion on technologies of electric power generation along with the different types of energy sources. Key Features : Includes numerous solved examples and illustrations for sound conceptual understanding. Provides well-graded chapter-end problems to develop the problem-solving capability of the students. Supplemented with three appendices addressing matrix algebra, trigonometric identities and Laplace transforms of commonly used functions to help students understand the mathematical concepts required for the study of electrical engineering.

This book on Basic Electrical Engineering , meant for undergraduate students of all disciplines, encompasses every detail about the required topics as per the syllabi in a student friendly style. Wide variety of problems and the right theoretical depth makes this book a perfect offering on the subject.

This textbook "Basic Electrical Engineering" is based on the latest syllabus of the Universities, AICTE and Educational Institutes. In this edition, some material of the book has been rewritten to make the presentation easily comprehensible. More illustrative examples mainly from IAS, IES and GATE and other competitive examinations have been added. Various problems with answers have been added to support the text. For quick revision, summary/highlights are given at the end of each chapter. Salient Features: · DC Circuits · AC Circuits · Transformers · Electrical Machines · Power converters · Electrical Installations

Covering the fundamentals of electrical technology and using these to introduce the application of electrical and electronic systems, this text had been updated to include recent developments in technology. It avoids unnecessary mathematics and features improved teaching aids, including: worked examples; updated and graded review questions; colour diagrams and chapter summaries. It is designed for use by students on NC, HNC and HND courses in electrical and electronic engineering.

This comprehensive book with a blend of theory and solved problems on Basic Electrical Engineering has been updated and upgraded in the Second Edition as per the current needs to cater undergraduate students of all branches of engineering and to all those who are appearing in competitive examinations such as AMIE, GATE and graduate IETE. The text provides a lucid yet exhaustive exposition of the fundamental concepts, techniques and devices in basic electrical engineering through a series of carefully crafted solved examples, multiple choice (objective type) questions and review questions. The book covers, in general, three major areas: electric circuit theory, electric machines, and measurement and instrumentation systems.

This book is designed based on revised syllabus of JNTU, Hyderabad (AICTE model curriculum) for under-graduate (B.Tech/BE) students of all branches, those who study Basic Electrical Engineering as one of the subject in their curriculum. The primary goal of this book is to establish a firm understanding of the basic laws of Electric Circuits, Network Theorems, Resonance, Three-phase circuits, Transformers, Electrical Machines and Electrical Installation.

This book is designed to help the first-year engineering students in building their concepts in the course of Basic Electrical Engineering, It introduces the subject in a simple and lucid manner for a better understanding. It adopts a student friendly approach with many solved examples and unsolved questions. This book will serve as a stepping stone for students in understanding the course efficiently. It provides complete coverage of MAKAUT 2018 syllabu.

Introduction * Wire and Cable Joints * Electrical Accessories* Electricity and Measurement * Electrical

This Book Is Written For Use As A Textbook For The Engineering Students Of All Disciplines At The First Year Level Of The B.Tech. Programme. The Text Material Will Also Be Useful For Electrical Engineering Students At Their Second Year And Third Year Levels.It Contains Four Parts, Namely, Electrical Circuit Theory, Electromagnetism And Electrical Machines, Electrical Measuring Instruments, And Lastly The Introduction To Power Systems. This Book Also Contains A Good Number Of Solved And Unsolved Numerical Problems. At The End Of Each Chapter References Are Included For Those Interested In Pursuing A Detailed Study.

A practical treatment of power system design within the oil, gas, petrochemical and offshore industries. These have significantly different characteristics to large-scale power generation and long distance public utility industries. Developed from a series of lectures on electrical power systems given to oil company staff and university students, Sheldrake's work provides a careful balance between sufficient mathematical theory and comprehensive practical application knowledge. Features of the text include:

Comprehensive handbook detailing the application of electrical engineering to the oil, gas and petrochemical industries Practical guidance to the electrical systems equipment used on off-shore production platforms, drilling rigs, pipelines, refineries and chemical plants Summaries of the necessary theories behind the design together with practical guidance on selecting the correct electrical equipment and systems required Presents numerous 'rule of thumb' examples enabling quick and accurate estimates to be made Provides worked examples to demonstrate the topic with practical parameters and data Each chapter contains initial revision and reference sections prior to concentrating on the practical aspects of power engineering including the use of computer modelling Offers numerous references to other texts, published papers and international standards for guidance and as sources of further reading material Presents over 35 years of experience in one self-contained reference Comprehensive appendices include lists of abbreviations in common use, relevant international standards and conversion factors for units of measure An essential reference for electrical engineering designers, operations and maintenance engineers and technicians.

BASIC ELECTRICAL ENGINEERINGTata McGraw-Hill EducationBasic Electrical EngineeringBasic Concepts of Electrical Engineering

An earnest attempt has been made in the book "Basic Concepts of Electrical and Electronics Engineering" to elucidate the principles and applications of Electrical and Electronics Engineering and its importance, as to evince interest on the topics so that the students gets motivated to study the subject with the interest.

This updated version of its internationally popular predecessor provides an introductory problem-solved text for understanding fundamental concepts of electronic devices, their design, and their circuitry. Providing an interface with Pspice, the most widely used program in electronics, new key features include a new chapter presenting the basics of switched mode power supplies, thirty-one new examples, and twenty-three PS solved problems.

It has often been experienced that students are required to perform experiments on certain topic before the relevant theory has been taught in the class. A laboratory manual which, in addition to a set of instructions for performing experiments, includes related theory in brief could help students understand experiments better. In response of demand from a large number of states for an appropriate laboratory manual in basic electricity and electrical measurements, The T.T.T.I., Chandigarh, has prepared this manual which has been tried out in various polytechnics and improved based on the feedback. The basic objective of the manual is to encourage students to perform experiments independently and purposefully. The manual organises the information to enable the students to verify known concepts and principles and to follow certain procedures and practices and thereby acquire relevant skills. Detailed instructions for carrying out each experiment along with relevant theory in brief have been given. The objectives for performing an experiment have been included at the beginning of each experiment. A list of questions given at the end of each experiment will help students evaluate his own understanding. The manual also includes guidelines for students and teachers for its effective use. An assessment proforma given at the beginning of the manual may be used by the teachers in evaluating the students.

This book is prepared as per the syllabus of Dr A P J Abdul Kalam Technical University, Uttar Pradesh for first year B. Tech (Engineering) course using the reference books given in the course syllabus. Authors have tried to elucidate the topics such a way that even a mediocre student can assimilate them. Many solved problems, sample question papers and exercise given in every section will provide a thorough understanding of topics

For over 15 years "Principles of Electrical Machines" is an ideal text for students who look to gain a current and clear understanding of the subject as all theories and concepts are explained with lucidity and clarity. Succinctly divided in 14 chapters, the book delves into important concepts of the subject which include Armature Reaction and Commutation, Single-phase Motors, Three-phase Induction motors, Synchronous Motors, Transformers and Alternators with the help of numerous figures and supporting chapter-end questions for retention.

Basic Electrical and Electronics Engineering provides an overview of the basics of electrical and electronic engineering that are required at the undergraduate level. The book allows students outside electrical and electronics engineering to easily

A good knowledge of C and C++ which is a fore runner to Object Oriented Programming is necessary for all Engineers and Scientists to tackle real time problems involving a voluminous data of different types and structures.

A bestselling calculations handbook that offers electric power engineers and technicians essential, step-by-step procedures for solving a wide array of electric power problems. This edition introduces a complete electronic book on CD-ROM with over 100 live calculations--90% of the book's calculations. Updated to reflect the new National Electric Code advances in transformer and motors; and the new system design and operating procedures in the electric utility industry prompted by deregulation.

The aim of this book is to provide a consolidated text for the first year B.E. Computer Science and Engineering students and B.Tech Information Technology students of Anna University. The syllabus has been thoroughly revised for the non-semester yearly pattern by the University. The book, made up of five chapters, systematically covers the five units of the syllabus. It begins with a detailed discussion on the fundamentals of electric circuits. DC circuits, AC circuits, 3-phase circuits, resonance and the network theorems. Lecture-type presentation of the rudiments of the fundamentals in conjunction with hundreds of solved examples is the strength of this book. Magnetic circuits and various magnetic elements and their properties, with number of illustrations are presented. DC machines and transformers are further dealt with. Equivalent circuits of machines supported with the respective photographs will ease the reader to understand the concepts of machines much better. Synchronous machines and asynchronous machines and fundamentals of control systems with various practical examples and relevant worked illustrations conclude this book. A large number of numerical illustrations and diagrammatic representations make this book valuable for students and teachers.

Divided into four parts: circuits, electronics, digital systems, and electromagnetics, this text provides an understanding of the fundamental principles on which modern electrical engineering is based. It is suitable for a variety of electrical engineering courses, and can also be used as a text for an introduction to electrical engineering.

Electrical and instrumentation engineering is changing rapidly, and it is important for the veteran engineer in the field not only to have a valuable and reliable reference work which he or she can consult for basic concepts, but also to be up to date on any changes to basic equipment or processes that might have occurred in the field. Covering all of the basic concepts, from three-phase power supply and its various types of connection and conversion, to power equation and discussions of the protection of power system, to transformers, voltage regulation, and many other concepts, this volume is the one-stop, "go to" for all of the engineer's questions on basic electrical and instrumentation engineering. There are chapters covering the construction and working principle of the DC machine, all varieties of motors, fundamental concepts and operating principles of measuring, and instrumentation, both from a "high end" point of view and the point of view of developing countries, emphasizing low-cost methods. A valuable reference for engineers, scientists, chemists, and students, this volume is applicable to many different fields, across many different industries, at all levels. It is a must-have for any library.

Unlike books currently on the market, this book attempts to satisfy two goals: combine circuits and electronics into a single, unified treatment, and establish a strong connection with the contemporary world of digital systems. It will introduce a new way of looking not only at the treatment of circuits, but also at the treatment of introductory coursework in engineering in general. Using the concept of "abstraction," the book attempts to form a bridge between the world of physics and the world of large computer systems. In particular, it attempts to unify electrical engineering and computer science as the art of creating and exploiting successive abstractions to manage the complexity of building useful electrical systems. Computer systems are simply one type of electrical systems. +Balances circuits theory with practical digital electronics applications. +Illustrates concepts with real devices. +Supports the popular circuits and electronics course on the MIT OpenCourse Ware from which professionals worldwide study this new approach. +Written by two educators well known for their innovative teaching and research and their

collaboration with industry. +Focuses on contemporary MOS technology.

The third edition of Basic Electrical Engineering is designed for the first year engineering students of University of Mumbai. The crisp yet complete explanation of topics will help the students easily understand the basic concepts. A plethora of various solved examples and exercise problems will enable students to practice better and excel in examinations. Salient Features: - Complete coverage of latest MU syllabus - Steps for drawing phasor diagrams have been covered in detail - Each section concludes with exercises, review questions and multiple choice questions to test understanding of topics - Examination-oriented pedagogy: * Solved MU problems within chapters: 106 * Solved examples within chapters: 340 * Unsolved exercise problems: 251 * Chapter end review questions: 56 * Multiple Choice Questions: 126

For the first time in India, we have a comprehensive introductory book on Basic Electrical Engineering that caters to undergraduate students of all branches of engineering and to all those who are appearing in competitive examinations such as AMIE, GATE and graduate IETE. The book provides a lucid yet exhaustive exposition of the fundamental concepts, techniques and devices in basic electrical engineering through a series of carefully crafted solved examples, multiple choice (objective type) questions and review questions. The book covers, in general, three major areas: electric circuit theory, electric machines, and measurement and instrumentation systems.

An earnest attempt has been made in the book 'Basic Concepts of Electrical Engineering' to elucidate the principles and applications of Electrical Engineering and also its importance, so as to evince interest on the topics so that the student gets motivated to study the subject with interest.

CHAPTER 1 BASICS AND ELECTRICAL NETWORK ANALYSIS I CHAPTER 2 ELECTRICAL NETWORK ANALYSIS II CHAPTER 3 MAGNETIC CIRCUITS & ELECTROMAGNETIC INDUCTION CHAPTER 4 ALTERNATING QUANTITIES - I CHAPTER 5 ALTERNATING QUANTITIES II CHAPTER 6 LOOP AND NODAL ANALYSIS CHAPTER 7 THREE-PHASE SYSTEMS CHAPTER 8 TRANSFORMERS CHAPTER 9 A.C. MACHINES I CHAPTER 10 A.C. MACHINES II CHAPTER 11 D.C. MACHINES COMPREHENSION - II CHAPTER 12 BASIC ELECTRICAL INSTRUMENTS REFERENCES

[Copyright: dab7415c17a29a29c2732fa5c3d50297](https://www.dab7415c17a29a29c2732fa5c3d50297)