Electrical Engineering Study Material

This study guide is centered on the idea of 'problem based learning'. It contains over 400 focused problems with detailed solutions based on the latest NCEES® FE Computer Based Testing specification for Electrical and Computer exam.

Attuned to the needs of undergraduate students of engineering in their first year, Basic Electrical Engineering enables them to build a strong foundation in the subject. A large number of real-world examples illustrate the applications of complex theories. The book comprehensively covers all the areas taught in a one-semester course and serves as an ideal study material on the subject.

Are you looking for a simple and understandable introduction to the basics of electrical engineering and electronics? Then you are well advised with this book! As an engineer (M.Eng.) I would like to teach you the basics of electrical engineering and electronics. In summary, this book offers you an easy to understand, intuitively structured and practical introduction to the world of electrical engineering! What is current and what is voltage? What is charge? What is power, what is 1 kWh? How does an electric motor work? What is the difference between direct current and alternating current? This electrical engineering handbook not only answers these questions, but also covers many other topics in depth and detail. In addition, in this compact beginner's guide, you

will quickly and easily learn the functions as well as the application of important electronic components such as resistors, diodes, transistors, capacitors and much more. This book offers you a comprehensive yet compact introduction to the basics of electrical engineering and electronics! In addition to important basic terms and principles, you will also learn, for example, how to analyze circuits (Kirchhoff's rules), what a bipolar transistor is, what a MOSFET is, and how a RLC circuit is designed. We will also look at what happens when you place an inductor in a magnetic field and what practical applications these basic principles have in our modern world. We will also do some calculations together and we will learn the mathematical equations behind the basic principles of electrical engineering in each chapter. However, depending on how deep you want to go into the material, you can also just take note of them. This fundamentals book is aimed specifically at anyone who has no prior knowledge of electrical and electronic engineering, or who already has some knowledge but is looking for a practical and understandable guide to electrical engineering. No matter what age you are, what profession you have, whether you are a pupil, student or pensioner. This book is for anyone who wants or needs to learn about electrical engineering and electronics. The aim of this book is to introduce you to how electrical engineering accompanies us in everyday life and the basic principles involved. In addition, you will learn the basics of direct current technology and alternating

current technology, their theoretical backgrounds and much more! Develop a basic understanding of electrical engineering and electronics in no time! Therefore, do not hesitate any longer, best take a look at the book and get your copy home as an ebook or paperback! Briefly summarized, you will learn the following in detail in this course: - Basic concepts and basic quantities of electrical engineering - How to analyze and solve electrical engineering circuits - Ohm's law, Ampere's law and Farady's law - Components such as resistor, diode (e.g. LED), transistor, capacitor, transformer, ..., and how they work and what they are used for - The difference between direct current and alternating current, as well as single-phase and multi-phase systems - How does electricity get into the house? Getting to know the power supply system - Direct current and alternating current motors and their structure / mode of operation - Outlook: Renewable energies such as photovoltaics and wind power - and much more! Take a look at the book and get your copy as an ebook or paperback!

Basic Electrical Engineering

Everything You Should Have Learned in School-- But Probably Didn't

Study Guide for PE Electrical and Computer - Power Exam

Introduction to Electrical Engineering

FE Electrical and Computer Review Manual

Transmission of Electrical Power

The Junior Electrical Engineer Passbook(R) prepares you

for your test by allowing you to take practice exams in the subjects you need to study. It provides hundreds of questions and answers in the areas that will likely be covered on your upcoming exam, including but not limited to: electrical engineering fundamentals; collection, analysis and application of quantitative data; interpretation of specifications and standards and ability to read plans; planning, scheduling and controlling projects; preparation of written material; and more.

This handbook has been designed for the aspirants of IES, GATE, PSUs and other competitive examinations. This specialized book for Electrical Engineering has been divided into 14 units each containing detailed theoretical content. Key terms in each unit have been given with their definitions. Every topic is taken up separately along with Key Points and notes. All the formulae used have been well illustrated and diagrams have been given for theoretical analysis. This book covers almost 100% syllabus of Electrical Engineering making it the only book for multipurpose quick revision and ensuring success in IES, GATE, PSUs and other competitive examinations. Appendix has been given at the end of the book.

Annotation Companion book to Electrical Engineering License Review. Here the end-of-chapter problems have been repeated and detailed Step-by-Step solutions are provided. Also included is a sample exam (same as 35X below), with detailed step-by-step solutions. 100% Problems and Solutions.

Elements of Electrical Engineering

Practise Over 400 Solved Problems Based on NCEES FE CBT Specification

Example Problems and Information to Help You Pass the PE

The Electrical Engineer's Guide to passing the Power PE Exam

Electrical Engineering (O.T.)

Problems and Solutions

Polyimide is one of the most efficient polymers in many industries for its excellent thermal, electrical, mechanical, and chemical properties as well as its easy processability. In the electronic and electrical engineering industries, polyimide has widely been used for decades thanks to its very good dielectric and insulating properties at the high electric field and at high temperatures of around 200°C in long term-service. Moreover, polyimide appears essential for the development of new electronic devices where further considerations such as high power density, integration, higher temperature, thermal conduction management, energy storage, reliability, or flexibility are required in order to sustain the growing global electrical energy consumption. This book gathers interdisciplinary chapters on polyimide in various topics through state-of-the-art and original ongoing research.

Many, in their quest for knowledge in engineering, find typical textbooks intimidating. Perhaps due to an extensive amount of physics theory, an overwhelming barrage of math, and not enough practical application of the engineering principles, laws, and equations. Therein

lies the difference between this text and those voluminous and daunting conventional university engineering textbooks. This text leads the reader into more complex and abstract content after explaining the electrical engineering concepts and principles in an easy to understand fashion, supported by analogies borrowed from day-to-day examples and other engineering disciplines. Many complex electrical engineering concepts, for example, power factor, are examined from multiple perspectives, aided by diagrams, illustrations, and examples that the reader can easily relate to. Throughout this book, the reader will gain a clear and strong grasp of electrical engineering fundamentals, and a better understanding of electrical engineering terms, concepts, principles, laws, analytical techniques, solution strategies, and computational techniques. The reader will also develop the ability to communicate with professional electrical engineers, controls engineers, and electricians on their "wavelength" with greater confidence. Study of this book can help develop skills and preparation necessary for succeeding in the electrical engineering portion of various certification and licensure exams, including Fundamentals of Engineering (FE), Professional Engineering (PE), Certified Energy Manager (CEM), and many other trade certification tests. This text can serve as a compact and simplified electrical engineering desk reference. This book provides a brief introduction to the NEC®, the Arc-Flash Code, and a better understanding of electrical energy and associated

cost. If you need to gain a better understanding of myriad battery alternatives available in the market, their strengths and weaknesses, and how batteries compare with capacitors as energy storage devices, this book can be a starting point. This book is ideal for engineers, engineering students, facility managers, engineering managers, program/project managers, and other executives who do not possess a current working knowledge of electrical engineering. Because of the simple explanations, analogies, and practical examples employed by the author, this book serves as an excellent learning tool for non-engineers, technical writers, attorneys, electrical sales professionals, energy professionals, electrical equipment procurement agents, construction managers, facility managers, and maintenance managers.

Electrical Engineering for GATE/PSUs exam contains exhaustive theory, past year questions and practice problems The book has been written as per the latest format as issued for latest GATE exam. The book covers Numerical Answer Type Questions which have been added in the GATE format. To the point but exhaustive theory covering each and every topic in the latest GATE syllabus.

Electrical Engineering Quick Reference for the Power, Electrical and Electronics, and Computer PE Exams

Electrical Engineering

Everything You Should Have Learned in School...but Probably Didn't

The Electrical Engineer's Guide to Passing the Power PE Exam - Spiral Bound Version

Practice Problems for the Electrical and Computer Engineering PE Exam

Fundamentals of Power System Protection

A comprehensive update of the leading algorithms text, with new material on matchings in bipartite graphs, online algorithms, machine learning, and other topics. Some books on algorithms are rigorous but incomplete; others cover masses of material but lack rigor. Introduction to Algorithms uniquely combines rigor and comprehensiveness. It covers a broad range of algorithms in depth, yet makes their design and analysis accessible to all levels of readers, with self-contained chapters and algorithms in pseudocode. Since the publication of the first edition, Introduction to Algorithms has become the leading algorithms text in universities worldwide as well as the standard reference for professionals. This fourth edition has been updated throughout. New for the fourth edition • New chapters on matchings in bipartite graphs, online algorithms, and machine learning • New material on topics including solving recurrence equations, hash tables, potential functions, and suffix arrays • 140 new exercises and 22 new problems • Reader feedback–informed improvements to old problems • Clearer, more personal, and gender-neutral writing style • Color added to improve visual presentation • Notes, bibliography, and index updated to reflect developments in the field • Website with new supplementary material

The CRC Principles and Applications in Engineering

series is a library of convenient, economical references sharply focused on particular engineering topics and subspecialties. Each volume in the series comprises chapters carefully selected from CRC's bestselling handbooks, logically organized for optimum convenience, and thoughtfully priced to fit

This book provides over 2,500 questions and answers for various types of electrical engineering exams or as a general review of key concepts. It covers all of the aspects of electrical engineering topics including electrical circuits, electromagnetic theory, measurements, control systems, computers, electronics, material science, machines, power systems, blockchain, and more. FEATURES Uses multiple choice questions and their answers in a " self-study format " to review key concepts in electrical engineering and related topics Provides over 2500 questions for reviewing a variety of topics including circuits, measurement, information and blockchain technology, power systems, electronics, and more

Electrical Machines - I

With MATLAB Programs and Experiments

UPSC IAS Mains Exam: General Studies Paper-3 Complete Study Material

Electrical Engineering 101

A Course in Electrical Engineering Materials

Basics, Components & Circuits Explained for Beginners

The Electrical Engineering - Power PE Exam Study Guide is 75 pages of reference material, 40 example test problems and a recommended list of "test-day" materials for

use in preparing to take the Electrical Engineering - Power PE Exam. The Study Guide was written by a licensed professional engineer (PE) with over 20 years practical experience in consulting engineering, project management and construction administration. This study guide will help you be successful on the Electrical Engineering - Power PE Exam by guiding you through exam preparation and by being a valuable resource on test day.

Electrical Engineering 101 covers the basic theory and practice of electronics, starting by answering the question "What is electricity?" It goes on to explain the fundamental principles and components, relating them constantly to real-world examples. Sections on tools and troubleshooting give engineers deeper understanding and the know-how to create and maintain their own electronic design projects. Unlike other books that simply describe electronics and provide step-by-step build instructions, EE101 delves into how and why electricity and electronics work, giving the reader the tools to take their electronics education to the next level. It is written in a down-to-earth style and explains jargon, technical terms and schematics as they arise. The author builds a genuine

understanding of the fundamentals and shows how they can be applied to a range of engineering problems. This third edition includes more real-world examples and a glossary of formulae. It contains new coverage of: Microcontrollers FPGAs Classes of components Memory (RAM, ROM, etc.) Surface mount High speed design Board layout Advanced digital electronics (e.g. processors) Transistor circuits and circuit design Op-amp and logic circuits Use of test equipment Gives readers a simple explanation of complex concepts, in terms they can understand and relate to everyday life. Updated content throughout and new material on the latest technological advances. Provides readers with an invaluable set of tools and references that they can use in their everyday work.

The Electrical Engineer Passbook(R) prepares you for your test by allowing you to take practice exams in the subjects you need to study. It provides hundreds of questions and answers in the areas that will likely be covered on your upcoming exam, including but not limited to: principles and practices of electrical engineering, including energy conservation; electrical plans, estimates and specifications; interpretation of codes and

standards applicable to electrical systems; design, construction and installation of electrical systems, including electrical engineering calculations and estimates; supervision; and more.

Electrical Engineering Fundamentals

Electrical Engineering Exam Prep

Dielectric Materials for Electrical Engineering

An Introduction

Junior Electrical Engineer

Handbook Series of Electrical Engineering

Time is of the essence on the electrical PE exam, and Electrical Engineering Quick Reference for the Power, Electrical and Electronics, and Computer PE Exams helps you best utilize each minute by putting the information you need the most at your fingertips. Using an exam-friendly format, Electrical Engineering Quick Reference logically organizes all the formulas and data from the Electrical Engineering Reference Manual that are likely to be used during the exam. Many exam problems can be solved using the Electrical Engineering Quick Reference alone. If you require more information, you can quickly refer to the Reference Manual as formulas and data are fully indexed for rapid retrieval. Electrical Engineering Quick Reference has been updated to the 8th edition of the Electrical Engineering Reference

Manual and covers the topics found on the Power, Electrical and Electronics, and Computer PE exams. Electrical Engineering Quick Reference saves you precious exam time by • Putting the data you need the most at your fingertips • Isolating the most useful equations and formulas in the Reference Manual • Allowing you to quickly retrieve formulas without the distraction of surrounding text • Cross-referencing additional information to the Reference Manual_____ Since 1975 more than 2 million people preparing for their engineering, surveying, architecture, LEED®, interior design, and landscape architecture exams have entrusted their exam prep to PPI. For more information, visit us at www.ppi2pass.com.

Pratiyogita Darpan (monthly magazine) is India's largest read General Knowledge and Current Affairs Magazine. Pratiyogita Darpan (English monthly magazine) is known for quality content on General Knowledge and Current Affairs. Topics ranging from national and international news/ issues, personality development, interviews of examination toppers, articles/ write-up on topics like career, economy, history, public administration, geography, polity, social, environment, scientific, legal etc, solved papers of various examinations, Essay and debate contest, Quiz and knowledge testing features are covered

every month in this magazine.
a spiral bound option. This more practical design allows for more efficient use during exam preparation and on test day. A streamlined study guide focusing on the majority of subjects required for the Professional Engineer Exam in the Electric Power discipline. 300 pages including a practice exam with detailed solutions.
Rapid Preparation for the Electrical and Computer Fundamentals of Engineering Exam
A Companion to the Electrical Engineering Reference Manual
Electrical Engineer
An Introduction to Electrical Engineering Materials
Electrical Engineering Problems and Solutions
Pratiyogita Darpan

This book includes my lecture notes for electrical power transmission course. The power transmission process, from generation to distribution is described and expressions for resistance, inductance and capacitance of high-voltage power transmission lines are developed used to determine the equivalent circuit of a three-phase transmission line. The book is divided to different learning outcomes Part 1- Describe the power transmission process, from generation to distribution. Part 2- Develop expressions for resistance, inductance and capacitance of high-voltage power transmission lines and determine the equivalent circuit of a three-phase transmission line. Part 1: Describe the power transmission process, from generation to distribution. · Describe the components of an electrical power system. ·

Identify types of power lines, standard voltages, and components of high-voltage transmission lines (HVTL). · Describe the construction of a transmission line, galloping lines, corona effect, insulator pollution, and lightning strikes. · Explain transmission system stability in regards to power transfer, power flow division, and transfer impedance. Part 2: Develop expressions for resistance, inductance and capacitance of high-voltage power transmission lines and determine the equivalent circuit of a three-phase transmission line. · List the types of conductors used in power transmission line. · Develop the expression for the inductance and capacitance of a simple, single-phase, two wire transmission line composed of solid round conductors. · Deduce the expression for the inductance and capacitance of a simple, single-phase composite (stranded) conductor line. · Derive the expression for the inductance and capacitance of three-phase lines having symmetrically and asymmetrically spacing and for bundled conductors. · Discuss the effect of earth on the capacitance of three-phase transmission lines. · Derive the short transmission lines models and medium transmission lines models.

More than 440 practice problems, with solutions Correlated with topics in the Electrical Engineering Reference Manual.

This comprehensive revision of a popular text helps non-electrical engineering majors--the future users, rather than the designers of electrical devices, systems, and machines--gain a conceptual understanding of electrical engineering. Early coverage of systems and an emphasis on an IC (integrated circuits) "building block" approach motivates non-majors. The text features integration of analog and digital technology with cutting-edge coverage of op-amps, feedback and analog systems. A section on SPICE, the leading computer-aided circuit analysis software, introduces students to computerized analysis of circuits. Chapter-end

Applications capture student interest by relating material to contemporary topics such as automobile suspension systems, high-fidelity audio, and hand-held computers.
Introduction to Algorithms, fourth edition
Electrical and Computer Engineering
Study Guide for Fundamentals of Engineering (FE) Electrical and Computer CBT Exam

Practice Over 500 Solved Problems with Detailed Solutions
UGC NET Paper-1 Study Material for Teaching & Research Aptitude with Higher education System

A Textbook for the students of B.Sc.(Engg.), B.E., B.Tech., AMIE and Diploma Courses. A new chapter on ""Semiconductor Fabrication Technology and Miscellaneous Semiconductor Devices"" had been included and additional self-assessment questions with answers and additional worked examples had been provided at the end of the BOOK.

Many examinees find the electrical and computer engineering sections of the general FE exam to be most the most challenging. Now, you can get the extra review and practice you need to meet this challenge through a concise review of the electrical and computer topics covered on the general morning and afternoon FE exams. Supplement your electrical and computer engineering knowledge Over 100 multiple-choice problems, with solutions, just like the exam Over 150 solved example problems Over 225 key charts, graphs, tables, and figures Improve your confidence and problem-solving skills _____ Since

1975 more than 2 million people preparing for their engineering, surveying, architecture, LEED , interior design, and landscape architecture exams have entrusted their exam prep to PPI. For more information, visit us at www.ppi2pass.com.

The Electrical Engineer's Handbook is an invaluable reference source for all practicing electrical engineers and students. Encompassing 79 chapters, this book is intended to enlighten and refresh knowledge of the practicing engineer or to help educate engineering students. This text will most likely be the engineer ' s first choice in looking for a solution; extensive, complete references to other sources are provided throughout. No other book has the breadth and depth of coverage available here. This is a must-have for all practitioners and students! The Electrical Engineer's Handbook provides the most up-to-date information in: Circuits and Networks, Electric Power Systems, Electronics, Computer-Aided Design and Optimization, VLSI Systems, Signal Processing, Digital Systems and Computer Engineering, Digital Communication and Communication Networks, Electromagnetics and Control and Systems. About the Editor-in-Chief... Wai-Kai Chen is Professor and Head Emeritus of the Department of Electrical Engineering and Computer Science at the University of Illinois at Chicago. He has extensive experience in education and industry and is very active professionally in the fields of circuits and systems. He was Editor-in-

Chief of the IEEE Transactions on Circuits and Systems, Series I and II, President of the IEEE Circuits and Systems Society and is the Founding Editor and Editor-in-Chief of the Journal of Circuits, Systems and Computers. He is the recipient of the Golden Jubilee Medal, the Education Award, and the Meritorious Service Award from the IEEE Circuits and Systems Society, and the Third Millennium Medal from the IEEE. Professor Chen is a fellow of the IEEE and the American Association for the Advancement of Science. * 77 chapters encompass the entire field of electrical engineering. * THOUSANDS of valuable figures, tables, formulas, and definitions. * Extensive bibliographic references.

The Electrical Engineering Handbook

UPSC Mains : ELECTRICAL ENGINEERING Question Papers (2010-2020)

Electrical Engineering | Step by Step

Polyimide for Electronic and Electrical Engineering Applications

FE Exam Review

Electrical Measurement, Signal Processing, and Displays

Part 1 is particularly concerned with physical properties, electrical ageing and modeling with topics such as the physics of charged dielectric materials, conduction mechanisms, dielectric relaxation, space charge,

electric ageing and life end models and dielectric experimental characterization. Part 2 concerns some applications specific to dielectric materials: insulating oils for transformers, electrorheological fluids, electrolytic capacitors, ionic membranes, photovoltaic conversion, dielectric thermal control coatings for geostationary satellites, plastics recycling and piezoelectric polymers.
The Electrical Engineer's Guide to passing the Power PE ExamPassing the Power PE ExamElectrical Engineering Exam PrepProblems and SolutionsMercury Learning and Information
General Studies Paper-3 Syllabus for UPSC Civil Services Mains Exam consists of the below major areas: Technology, Economic Development, Biodiversity, Environment, Security and Disaster Management. Detailed syllabus as provided by UPSC is as below: GENERAL STUDIES 3 PAPER SYLLABUS FOR UPSC CIVIL SERVICES MAINS 1. Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment. 2. Inclusive growth and issues arising

from it. 3. Government Budgeting. 4. Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers. 5. Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing. 6. Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management. 7. Land reforms in India. 8. Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth. 9. Infrastructure: Energy, Ports, Roads, Airports, Railways etc. 10. Investment models. 11. Science and Technology- developments and their applications and effects in everyday life. 12. Achievements of Indians in science &

technology; indigenization of technology and developing new technology. 13. Awareness in the fields of IT, Space, Computers, robotics, nanotechnology, biotechnology and issues relating to intellectual property rights. 14. Conservation, environmental pollution and degradation, environmental impact assessment. 15. Disaster and disaster management. 16. Linkages between development and spread of extremism. 17. Role of external state and non-state actors in creating challenges to internal security. 18. Challenges to internal security through communication networks, the role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention. 19. Security challenges and their management in border areas; linkages of organized crime with terrorism. 20. Various Security forces and agencies and their mandate. Technology, Economic Development, Bio-diversity, Environment, Security and Disaster Management Topic Covered: 1. Challenges to Internal Security through

Communication Networks 2. Money Laundering and Its Prevention 3. Role of Media and Social Networking Sites in Internal Security Challenges 4. Linkages of Organised Crime with Terrorism 5. Land reforms in India 6. Linkages between development and spread of extremism 7. Issues relating to intellectual property rights 8. Awareness in the fields of IT 9. Awareness in the fields of Computers 10. Awareness in the fields of Robotics 11. Awareness in the field of Space 12. Awareness in the fields of Bio-technology 13. Awareness in the fields of nano-technology 14. Conservation 15. Environmental pollution and degradation 16. Environmental impact assessment 17. Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management. 18. Environmental Impact Assessment 19. Food processing and related industries in India 20. Security challenges and their management in border areas 21. Disaster Management 22. Indian Economy and issues relating to planning, mobilization of resources, growth,

development and employment 23. Major crops cropping patterns in various parts of the country 24. Different types of irrigation and irrigation systems storage 25. E-technology in the aid of farmers 26. Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth. 27. Transport and marketing of agricultural produce and issues and related constraints 28. Inclusive growth and issues arising from it 29. Public Distribution System-, functioning, limitations, revamping 30. Issues of buffer stocks and food security 31. Economics of Animal Rearing 32. Infrastructure: Energy, Ports, Roads, Airports, Railways 33. Science and Technology 34. Effects of science and technology in everyday life 35. Application of science and technology 36. Achievements of Indians in science & technology 37. Developments Science and Technology 38. Indigenization of Technology and Developing New Technology 39. Role of External State and non-state Actors in creating Challenges to internal Security 40. Issues related to direct

and indirect farm subsidies and minimum support prices

A First Course in Electrical and Computer Engineering

Electrical Engineering Guide for GATE/ PSUs

STUDY GUIDE for the POWER Portion of the ELECTRICAL ENGINEERING PE EXAM

Lecture Notes of Electric Power Transmission Course

'Practice makes perfect' is as applicable to passing PE exam as it is to anything else.This study guide is centered on the idea of 'problem-based' learning. It contains over 500 focused practice problems with detailed solutions based on the latest NCEES(r) PE Electrical and Computer - Power Exam Specification and covers all exam topics including:Measurement and Instrumentation - Special Applications - Codes and Standards - Analysis - Devices and Power Electronic Circuits - Induction and Synchronous Machines - Electric Power Devices - Power System Analysis - ProtectionThe content of this study guide is specially developed to assist students in building knowledge base for quantitative and qualitative exam-style questions. Students will find relevant formulas, code references and explanations as part of detailed solutions. Topic specific tips are also included at the beginning of each chapter.Target audience of this book includes recent graduates as

well as seasoned professionals who have been out of school for some time.

The importance of various electrical machines is well known in the various engineering fields. The book provides comprehensive coverage of the magnetic circuits, magnetic materials, single and three phase transformers and d.c. machines. The book is structured to cover the key aspects of the course Electrical Machines - I. The book starts with the explanation of basics of magnetic circuits, concepts of self and mutual inductances and important magnetic materials. Then it explains the fundamentals of single phase transformers including the construction, phasor diagram, equivalent circuit, losses, efficiency, methods of cooling, parallel operation and autotransformer. The chapter on three phase transformer provides the detailed discussion of construction, connections, phasor groups, parallel operation, tap changing transformer and three winding transformer. The various testing methods of transformers are also incorporated in the book. The book further explains the concept of electromechanical energy conversion including the discussion of singly and multiple excited systems. Then the book covers all the details of d.c. generators including construction, armature reaction, commutation, characteristics, parallel operation and applications. The book also includes the details of d.c. motors such as characteristics, types of starters,

speed control methods, electric braking and permanent magnet d.c. motors. Finally, the book covers the various testing methods of d.c. machines including Swinburne's test, brake test, retardation test and Hopkinson's test. The book uses plain, lucid language to explain each topic. The book provides the logical method of explaining the various complicated topics and stepwise methods to make the understanding easy. Each chapter is well supported with necessary illustrations, self-explanatory diagrams and variety of solved problems. All the chapters are arranged in a proper sequence that permits each topic to build upon earlier studies. The book explains the philosophy of the subject which makes the understanding of the concepts very clear and makes the subject more interesting.

Prepare to pass the computer-based FE Electrical and Computer exam with PPI's FE Electrical and Computer Review Manual.