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# For Mtech Books Heat Power Engineering Second Semester Refer In Nagpur University

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Engineering Thermodynamics  
A Cyber-Physical Systems Approach  
Recent Advances in Mechanical Engineering  
Mechanical Measurements  
Operations Research (linear Programming)  
Select Proceedings of ICTEMA 2020  
Select Proceedings of RTFDR 2021  
Electric Power Quality  
Select Proceedings of ICCEMME 2021  
A HEAT TRANSFER TEXTBOOK  
Andhra Pradesh Year Book  
Advances in Thermofluids and Renewable Energy  
Flexible Kalina Cycle Systems  
Basic Mechanical Engineering (Be 204)  
Recent Advances in Mechanical Engineering  
Select Proceedings of ICRAMERD 2020  
Fundamental and Advanced Topics  
Select Proceedings of ICAST 2020  
Chemical Engineering Practice  
Innovations in Energy, Power and Thermal Engineering  
Flexible Kalina Cycle Systems  
Nanofluids and Their Engineering Applications  
Current Advances in Mechanical Engineering  
Select Proceedings of ICROME 2020  
ELECTRIC POWER GENERATION  
Power System Analysis and Design  
Heat Treating Progress  
Textbook of Thermal Engineering  
Recent Trends in Thermal Engineering  
Hybrid Solar-Biomass Power Generation  
Advances in Thermal Engineering, Manufacturing, and Production Management  
With MATLAB (R) Applications  
Solar Drying Systems  
For Power Plant Professionals  
Intelligent Renewable Energy Systems  
Fluid Mechanics, Heat Transfer, and Mass Transfer  
Integrating Artificial Intelligence Techniques and Optimization Algorithms  
Select Proceedings of RAME 2020

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## QUINTIN SINGH

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**Engineering Thermodynamics** bohem  
press

**INTELLIGENT RENEWABLE ENERGY SYSTEMS** This collection of papers on artificial intelligence and other methods for improving renewable energy systems, written by industry experts, is a reflection of the state of the art, a must-have for engineers, maintenance personnel, students, and anyone else wanting to stay abreast with current energy systems concepts and technology. Renewable energy is one of the most important subjects being studied, researched, and advanced in today's world. From a macro level, like the stabilization of the entire world's economy, to the micro level, like how you are going to heat or cool your home tonight, energy, specifically renewable energy, is on the forefront of the discussion. This book illustrates modelling, simulation, design and control of renewable energy systems employed with recent artificial intelligence (AI) and optimization techniques for performance enhancement. Current renewable energy sources have less power conversion efficiency because of its intermittent and fluctuating behavior. Therefore, in this regard, the recent AI and optimization techniques are able to deal with data ambiguity, noise, imprecision, and nonlinear behavior of renewable energy sources more efficiently compared to classical soft computing techniques. This book provides an extensive analysis of recent state of the art AI and

optimization techniques applied to green energy systems. Subsequently, researchers, industry persons, undergraduate and graduate students involved in green energy will greatly benefit from this comprehensive volume, a must-have for any library. Audience Engineers, scientists, managers, researchers, students, and other professionals working in the field of renewable energy.

**A Cyber-Physical Systems Approach**  
Springer Nature

The purpose of the book is to make the reader familiar with the field of solar energy and biomass. The material presented in this book covers a large variety of solar thermal technologies like water heating system, parabolic trough collector, parabolic disc, linear Fresnel reflector etc. and its applications like, cooling, power generation and its future solution to hybrid solar thermal with biomass energy. It gives short historical introduction about solar thermal application in India. It also gives the future solution of solar thermal for continuous power generation and other applications like cooling, process heat, cooking.

*Recent Advances in Mechanical Engineering* Cengage Learning

This book presents the select proceedings of International Conference on Innovations in Thermo-Fluid Engineering and Sciences (ICITFES 2020). It covers the theoretical and experimental research works carried out in the field of energy and power engineering. Various topics covered include fluid mechanics, gas turbines and dynamics, heat transfer, humidity and control, multiphase flow, ocean

engineering, power and energy, refrigeration and air conditioning, renewable energy, and thermodynamics. The book will be helpful for the researchers, scientists, and professionals working in the field of energy, power engineering, and thermal engineering.

**Mechanical Measurements** Notion Press

This book presents the select proceedings of the International Conference on Advances in Sustainable Technologies (ICAST 2020), organized by Lovely Professional University, Punjab, India. It gives an overview of recent developments in the field of fluid dynamics and thermal engineering. Some of the topics covered in this book include HVAC systems, alternative fuels, renewable energy, nano fluids, industrial advancements in energy systems, energy storage, multiphase transport and phase change, conventional and non-conventional energy theoretical and experimental fluid dynamics, numerical methods in heat transfer and fluid mechanics, different modes of heat transfer, fluid machinery, turbo machinery, and fluid power. The book will be useful for researchers and professionals working in the field of fluid dynamics and thermal engineering.

*Operations Research (linear Programming)* Springer Nature

This book presents select proceedings of the International Conference on Innovations in Thermo-Fluid Engineering and Sciences (ICITFES 2020). It covers topics in theoretical and experimental fluid dynamics, numerical methods in heat transfer and fluid mechanics, different modes of heat transfer, multiphase flow, fluid machinery, fluid power, refrigeration and air conditioning, and cryogenics. The book will be helpful to the researchers, scientists, and

professionals working in the field of fluid mechanics and machinery, and thermal engineering.

**Select Proceedings of ICTEMA 2020** Springer

Nanofluids are solid-liquid composite material consisting of solid nanoparticles suspended in liquid with enhanced thermal properties. This book introduces basic fluid mechanics, conduction and convection in fluids, along with nanomaterials for nanofluids, property characterization, and outline applications of nanofluids in solar technology, machining and other special applications. Recent experiments on nanofluids have indicated significant increase in thermal conductivity compared with liquids without nanoparticles or larger particles, strong temperature dependence of thermal conductivity, and significant increase in critical heat flux in boiling heat transfer, all of which are covered in the book. Key Features Exclusive title focusing on niche engineering applications of nanofluids Contains high technical content especially in the areas of magnetic nanofluids and dilute oxide based nanofluids Feature examples from research applications such as solar technology and heat pipes Addresses heat transfer and thermodynamic features such as efficiency and work with mathematical rigor Focused in content with precise technical definitions and treatment

**Select Proceedings of RTFDR 2021** John Wiley & Sons

Electrical Power Generation - Conventional and Renewable is comprehensive textbook meant for B.Tech (Electrical Engineering), B.Tech (Electrical and Electronics), M Tech(Electrical Engineering) and M Tech(Mechanical Engineering)

students. This book is also useful for students preparing for GATE, AMIE, UPSC (Engineering Services) and IIT Exams. The book covers complete syllabus prescribed by various universities, Institutes and NIT's etc. It contains large number of solved numerical problems, flowcharts, diagrams for easy comprehension. Various pedagogical features such as learning objectives, chapter summary, list of formulae, multiple choice questions, numerical questions and short answer type questions are provided for practice and understanding. It covers syllabus for subjects viz. power station practice, renewable energy resources, energy technology and electrical power generation.

*Electric Power Quality* Springer Nature  
This book illustrates operation and maintenance practices/guidelines for economic generation and managing health of a thermal power generator beyond its regulatory life. The book provides knowledge for professionals managing power station operations, through its unique approach to chemical analysis of water, steam, oil etc. to identify malfunctioning/defects in equipment/systems much before the physical manifestation of the problem. The book also contains a detailed procedure for conducting performance evaluation tests on different equipment, and for analyzing test results for predicting maintenance requirements, which has lent a new dimension to power systems operation and maintenance practices. A number of real life case studies also enrich the book. This book will prove particularly useful to power systems operations professionals in the developing economies, and also to researchers and students involved in

studying power systems operations and control.

*Select Proceedings of ICCEMME 2021*  
Springer Nature

Computational Methods in Engineering brings to light the numerous uses of numerical methods in engineering. It clearly explains the application of these methods mathematically and practically, emphasizing programming aspects when appropriate. By approaching the cross-disciplinary topic of numerical methods with a flexible approach, Computational Methods in Engineering encourages a well-rounded understanding of the subject. This book's teaching goes beyond the text—detailed exercises (with solutions), real examples of numerical methods in real engineering practices, flowcharts, and MATLAB codes all help you learn the methods directly in the medium that suits you best.

Balanced discussion of mathematical principles and engineering applications  
Detailed step-by-step exercises and practical engineering examples to help engineering students and other readers fully grasp the concepts  
Concepts are explained through flowcharts and simple MATLAB codes to help you develop additional programming skills

*A HEAT TRANSFER TEXTBOOK* Springer  
This book addresses the concept and applications of Finite Time Thermodynamics to various thermal energy conversion systems including heat engines, heat pumps, and refrigeration and air-conditioning systems. The book is the first of its kind, presenting detailed analytical formulations for the design and optimisation of various power producing and cooling cycles including but not limited to: • Vapour power cycles • Gas power cycles • Vapour compression cycles • Vapour absorption cycles •

Rankine cycle coupled refrigeration systems Further, the book addresses the thermoeconomic analysis for the optimisation of thermal cycles, an important field of study in the present age and which is characterised by multi-objective optimization regarding energy, ecology, the environment and economics. Lastly, the book provides the readers with key techniques associated with Finite Time Thermodynamics, allowing them to understand the relevance of irreversibilities associated with real processes and the scientific reasons for deviations from ideal performance. The book is aimed at a broad readership, and offers a valuable reference book for graduate students, scholars and professionals working in the areas of thermal science and engineering.

Andhra Pradesh Year Book Phlogiston Press

*Innovations in Energy, Power and Thermal Engineering* Select Proceedings of ICITFES 2020 Springer Nature  
*Advances in Thermofluids and Renewable Energy* CRC Press

This book comprises the select proceedings of the International Conference on Recent Trends in Developments of Thermofluids and Renewable Energy (TFRE 2020). The major topics covered include aerodynamics, alternate energy, bio fuel, bio heat transfer, computational fluid dynamics, control mechanism for constant power generation, and energy storage. The book also discusses latest developments in the fields of electric vehicles, hybrid power systems, and solar and renewable energy. Given the scope of its contents, this book will be useful for students, researchers, and professionals interested in the field of thermofluids and renewable energy

resources.

**Flexible Kalina Cycle Systems** MIT Press

This accessible text, now in its Second Edition, continues to provide a comprehensive coverage of electric power generation, transmission and distribution, including the operation and management of different systems in these areas. It gives an overview of the basic principles of electrical engineering and load characteristics and provides exhaustive system-level description of several power plants, such as thermal, electric, nuclear and gas power plants. The book fully explores the basic theory and also covers emerging concepts and technologies. The conventional topics of transmission subsystem including HVDC transmission are also discussed, along with an introduction to new technologies in power transmission and control such as Flexible AC Transmission Systems (FACTS). Numerous solved examples, inter-spersed throughout, illustrate the concepts discussed. What is New to This Edition : Provides two new chapters on Diesel Engine Power Plants and Power System Restructuring to make the students aware of the changes taking place in the power system industry. Includes more solved and unsolved problems in each chapter to enhance the problem solving skills of the students. Primarily designed as a text for the undergraduate students of electrical engineering, the book should also be of great value to power system engineers.

**Basic Mechanical Engineering (Be 204)** Springer Nature

This book is intended to meet the requirements of the fresh engineers on the field to endow them with indispensable information, technical know-how to work in the power plant industries and its associated plants. The

book provides a thorough understanding and the operating principles to solve the elementary and the difficult problems faced by the modern young engineers while working in the industries. This book is written on the basis of 'hands-on' experience, sound and in-depth knowledge gained by the authors during their experiences faced while working in this field. The problem generally occurs in the power plants during operation and maintenance. It has been explained in a lucid language.

*Recent Advances in Mechanical Engineering* CRC Press

The Subject Operations Research Is A Branch Of Mathematics. Many Authors Have Written Books On Operations Research. Most Of Them Have Mathematical Approach Rather Than Decision-Making Approach. Actually The Subject Deals With Applied Decision Theory, So I Have Dealt With The Subject With Decision-Theory Approach. The Book Has Fifteen Chapters. The First Five Chapters Deal With Linear Programming Problems, Such As Resource Allocation Problem, Transportation Problem And Assignment Problem Both Maximization And Minimization Versions. In The First Chapter, The Historical Background Of Operations Research (O.R.) And Definition And Objective Of The Subject Matter Along With Model Building Is Discussed To Help The Learners To Have Basic Knowledge Of O.R. Typical Problems Of Mathematical Orientation And Decision Making Orientation Have Been Solved. In Transportation Model And In Assignment Model, Problems Useful To Production And Operations Management Have Been Solved To Make The Students To Know The Application Part Of The Subject. The Sixth Chapter Deals With Sequencing Model, Where The Importance And Application Of The

Models Is Dealt In Detail. The Problem Of Replacement Is Discussed In Chapter-7. Inventory Model With Certain Topics Like Abc, Ved, Fsn, P-System And Q-System Is Discussed To Make The Students Aware Of The Importance Of Inventory Model. Chapter-9 Deals With Waiting Line Model And Its Application With Certain Useful Problems And Their Solutions. Game Theory Or Competitive Theory Is Discussed In Chapter-10 With Certain Problems, Which Have Their Application In Real World Situation. Dynamic Programming Is Dealt In Chapter-11. The Problems Worked Out Have Practical Significance. Chapter-12 Deals With Decision Theory Where The Usefulness Of Decision Tree Is Discussed. Non-Linear Programming Is Briefly Discussed In Chapter-14 With Certain Useful Problems. In Chapter -15, The Two Network Techniques I.E. Pert And Cpm Have Been Discussed With Typical Worked Out Examples. At The End Of The Book, Objective Type Questions, Which Are Helpful For Competitive Examinations Are Given To Help The Students To Prepare For Such Examinations.

### **Select Proceedings of ICRAMERD**

**2020** John Wiley & Sons

The first edition of this book was co-published by Ane Books India, and CRC Press in 2008. This second edition is an enlarged version of the web course developed by the author at IIT Madras, and also a modified and augmented version of the earlier book. Major additions/modifications presented are in the treatment of errors in measurement, temperature measurement, measurement of thermo-physical properties, and data manipulation. Many new worked examples have been introduced in this new and updated second edition.



### Fundamental and Advanced Topics

Springer Nature

This book presents the select proceedings of the International Conference on Recent Advancements in Mechanical Engineering (ICRAME 2020). It provides a comprehensive overview of the various technical challenges faced, their systematic investigation, contemporary developments, and future perspectives in the domain of mechanical engineering. The book covers a wide array of topics including fluid flow techniques, compressible flows, waste management and waste disposal, bio-fuels, renewable energy, cryogenic applications, computing in applied mechanics, product design, dynamics and control of structures, fracture and failure mechanics, solid mechanics, finite element analysis, tribology, nano-mechanics and MEMS, robotics, supply chain management and logistics, intelligent manufacturing system, rapid prototyping and reverse engineering, quality control and reliability, conventional and non-conventional machining, and ergonomics. This book can be useful for students and researchers interested in mechanical engineering and its allied fields.

*Select Proceedings of ICAST 2020* CRC Press

An introduction to the engineering principles of embedded systems, with a focus on modeling, design, and analysis of cyber-physical systems. The most visible use of computers and software is processing information for human consumption. The vast majority of computers in use, however, are much less visible. They run the engine, brakes, seatbelts, airbag, and audio system in your car. They digitally encode your voice and construct a radio signal to

send it from your cell phone to a base station. They command robots on a factory floor, power generation in a power plant, processes in a chemical plant, and traffic lights in a city. These less visible computers are called embedded systems, and the software they run is called embedded software. The principal challenges in designing and analyzing embedded systems stem from their interaction with physical processes. This book takes a cyber-physical approach to embedded systems, introducing the engineering concepts underlying embedded systems as a technology and as a subject of study. The focus is on modeling, design, and analysis of cyber-physical systems, which integrate computation, networking, and physical processes. The second edition offers two new chapters, several new exercises, and other improvements. The book can be used as a textbook at the advanced undergraduate or introductory graduate level and as a professional reference for practicing engineers and computer scientists. Readers should have some familiarity with machine structures, computer programming, basic discrete mathematics and algorithms, and signals and systems.

Chemical Engineering Practice John Wiley & Sons

This volume provides a good understanding of the binary fluid system, highlighting new dimensions of the existing Kalina cycle system, a thermodynamic process for converting thermal energy into usable mechanical power. The book illustrates that providing new flexibility leads to new research outcomes and possible new projects in this field. The information provided in the book simplifies the application of the Kalina cycle system

with an easy-to-understand and thorough explanation of properties development, processes solutions, sub-system work, and total system work. There are currently no books available in the area of binary fluid system in the field of KCS with added fallibility in the operation and process design. Currently decentralized power systems are gaining more attention due to shortages in power, and cooling demands are competing with other electrical loads. This book fills a valuable information gap, providing insight into a new dimension for designers, practicing engineers, and academicians in this area.

Innovations in Energy, Power and Thermal Engineering PHI Learning Pvt.

Ltd.

The new edition of POWER SYSTEM ANALYSIS AND DESIGN provides students with an introduction to the basic concepts of power systems along with tools to aid them in applying these skills to real world situations. Physical concepts are highlighted while also giving necessary attention to mathematical techniques. Both theory and modeling are developed from simple beginnings so that they can be readily extended to new and complex situations. The authors incorporate new tools and material to aid students with design issues and reflect recent trends in the field. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

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