



Thermal Engineering- I

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Product Description

Thermal Engineering- I This book introduces various energy sources; fossil and renewable fuels, their properties, followed by other non-conventional sources such as nuclear and fuel cells. It discusses the types of heat engines; diesel engine, petrol engine, their working principle, components and standard thermodynamic cycles. The book provides insights of various system and IC engines such as fuel injection system, ignition system, lubricating system and also briefly covers governing of IC engines. Further this book provides basic insights of the important parameters to evaluate the performance of I.C. engines. Finally, useful discussions on the fundamentals of air compressors and their types, vapour compression refrigeration system, types of refrigerants, types of air conditioning, and seasonal air conditioning. This book also presents the method to conduct experiments for measuring important properties used in the analysis. **Salient features:**

- Content of the book aligned with the mapping course outcomes, programs and Units Outcomes.
- In the beginning of each unit learning outcomes are listed to make the student understand what is expected out of him/her after completing that unit.
- Book provides lots of recent information, interesting facts, QR code for E-resources, QR code for use of ICT, projects, group discussion etc.
- Student and teacher centric subject materials included in book with balanced and chronological manner.
- Figures, tables, and software screen shots are inserted to improve clarity of the topics.
- Apart from essential information a 'know more' section is also provided in each unit to extend the learning beyond syllabus.
- Short questions, objective questions and long answer exercises are given for practice of students after every chapter.
- Solved and unsolved problems including numerical examples are solved with systematic steps.



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