

# BOOKS FOR 1ST YEAR ENGINEERING COURSES

## ENGINEERING PHYSICS

R.K. Gaur & S.L. Gupta

ISBN: 978-81-89928-22-3

PART I. PROPERTIES OF MATTER : 1. Vectors 2. Force and Motion 3. Circular Motion 4. Conservation Laws 5. Dynamics of Rigid Bodies — Moment of Inertia 6. Gravitation, Gravity and Satellites 7. Elasticity 8. Surface Tension and Viscosity.

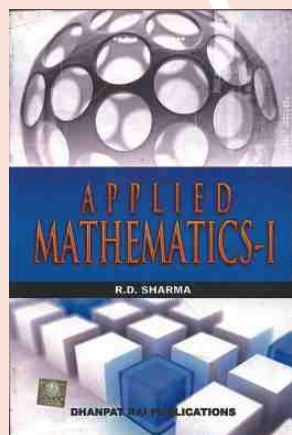
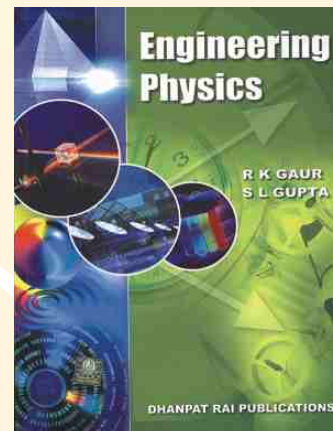
PART II. HEAT : 9. Temperature and its Measurement 10. Calorimetry and Change of State 11. Expansion of Gases and Gas Laws 12. Specific Heat of Gases 13. Expansion and Compression of Gases 14. Kinetic Theory of Gases 15. Thermodynamics 16. Transmission of Heat 17. Vacuum, Technology.

PART III. LIGHT : 18. Reflection, Refraction and Dispersion of Light 19. Refraction at Spherical Surfaces: Thin Lens Formula 20. Lens Aberrations 21. Cardinal Points and Eyepieces 22. Optical Instruments 23. Velocity of Light 24. Photometry 25. Wave Theory of Light 26. Interference 27. Diffraction 28. Resolving Power of Optical Instruments 29. Polarisation 30. Doppler Effect 31. Light Amplification by Stimulated Emission of Radiation (LASER) 32. Holography and Fibre Optics.

PART IV. SOUND : 33. Simple Harmonic Motion: Free, Damped and Forced Vibrations 34. Wave Motion 35. Superposition of Waves 36. Velocity of Sound: Kundt's Tube 37. Transverse Vibrations of Stretched Strings 38. Vibrations of Air-Column 39. Doppler's Principle 40. Musical Sounds 41. Acoustics of Buildings 42. Ultrasonics.

PART V. ELECTRICITY AND MAGNETISM : 43. Electric Field and Potential 44. Capacity and Condensers 45. Chemical Effect of Current and Cells 46. D.C. Circuits 47. Electromagnetism 48. Magnetic Properties of Materials and Magnetic Circuits 49. Electromagnetic Induction 50. A.C. Circuits 51. Thermo-Electricity 52. Vacuum Valves and Their Applications 53. Maxwell's Equations and Electromagnetic Waves.

PART VI. MODERN PHYSICS 54. Cathode Rays and Positive Rays 55. Atomic Structure 56. Quantum Theory 57. Waves and Particles 58. Crystal Structure 59. X-rays 60. Classification of Solids (Metals, Insulators and Semiconductors) 61. Radioactivity and Nuclear Detectors 62. Structure of the Nucleus and Particle Accelerators 63. Nuclear Fission and Fusion 64. Special Theory of Relativity.



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R.D. Sharma

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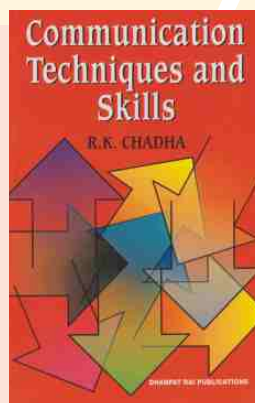
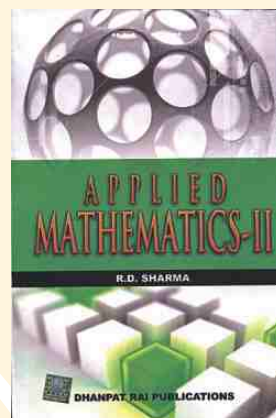
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R.K. Chadha

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R.K. Chadha

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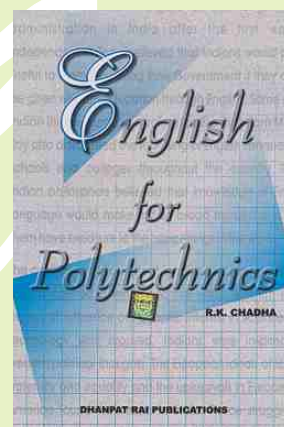
SECTION - I : A BOOK OF ENGLISH FOR POLYTECHNICS 1. Adventure in Space 2. An Engineering Wizard 3. The Diamond Necklace 4. Uncle Podger Hangs a Picture 5. Subhash Chandra Bose 6. A Pair of Mustachios 7. Guru Gobind Singh 8. With the Photographer 9. God Lives in the Panch 10. The Man Who Found Penicillin 11. Guru Nanak 12. Sir Jagadish Chandra Bose.

SECTION - II : COMPREHENSION 1. Introduction 2. Solved Passages 3. Passage for Practice.

SECTION - III : GRAMMAR 1. Determiners 2. Modals 3. Prepositions 4. Tenses 5. Direct - Indirect 6. Active - Passive 7. Punctuation.

SECTION - IV : ESSAY WRITING 1. Science in Everyday Life 2. Some Recent Wonders of Science 3. Science – A Blessing or a Curse 4. Space Science and India 5. IT Revolution in India 6. Role of Engineers in Nation Building 7. Importance of Technical Education 8. Importance of English in India

9. Examinations 10. Life in a Big City 11. A Pleasant Evening I can't Forget 12. An Ideal World of Your Dreams 13. India on the Path of Progress 14. The Problem of Unemployment 15. The Population Problem of India 16. Menace of Pollution 17. Corruption in India 18. National Integration 19. Fight Against Terrorism 20. Role of Women in Nation Building 21. Importance of Advertisements 22. Power and Responsibilities of Press 23. Value of Sports 24. Value of Discipline.



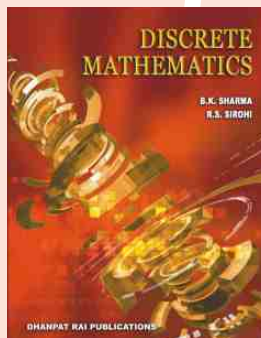
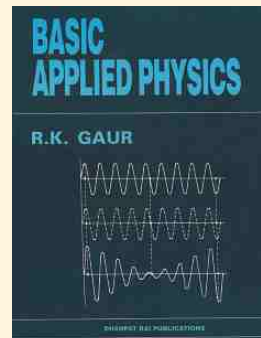
# BOOKS FOR 1ST YEAR ENGINEERING COURSES

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R.K. Gaur

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## DISCRETE MATHEMATICS

B.K. Sharma & R.S. Sirohi

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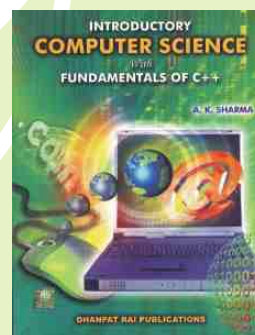
1. Set Theory 2. Relations and Functions 3. Groups 4. Rings 5. Possets and Lattices 6. Discrete Numeric Functions 7. Generating Functions 8. Recurrence Relations 9. Boolean Algebra 10. Mathematical Logic 11. Mathematical Induction 12. Graphs — An Introduction 13. Graph Operations 14. Isomorphism 15. Tree 16. Colouring 17. Basic combinatorics 18. Polya's theorem

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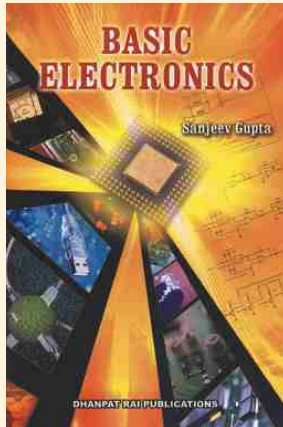
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1. Evolution of Computers 2. Concept of Booting and Use of Operating System 3. Software Concepts and Operating Systems 4. Introduction to C++ 5. General Concepts of OOP 6. Operators and Expressions 7. Problems Solving Methodology 8. Flow Chart 9. Flow of Control 10. Input-Output Functions 11. Structured Data Type: Arrays 12. Functions 13. Standard Library Functions and Header Files 14. Structures 15. Programming Methodology 16. Data Representation 17. Hardware Organization of a Computer 18. Input Output Devices 19. Input Output Ports/Connectors and Other Devices; Appendices and Glossary.



# BOOKS FOR 1ST YEAR ENGINEERING COURSES



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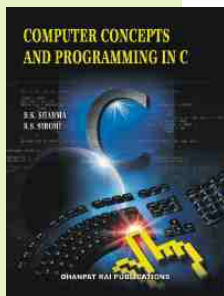
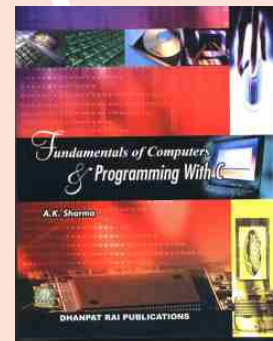
1. Electronic Components
2. Basic Electronic circuits
3. Measuring Instruments
4. P-N Junction Diode
5. Integrated Circuits and Operation Amplifiers

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A.K. Sharma

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2. Hardware Organization of a Computer
3. Input Output Devices
4. Input output ports/Connectors and Other Devices
5. Data Representation
6. Introduction to Programming Languages
7. Operating System
8. Computer Networks and Internet
9. Introduction to C
10. Operators and Expressions
11. Problem Solving and Programming Methodology
12. Flow Charts
13. Flow of Control
14. Input Output Functions
15. Structured Data Type: Arrays
16. Structures
17. Pointers
18. Functions
19. File Handling in C
- Appendices and Glossary.



## COMPUTER CONCEPTS AND PROGRAMMING IN C

B.K. Sharma  
R.S. Sirohi

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1. Introduction to Computer and Operating System
2. Number System
3. Algorithm and Flow Chart
4. Introduction to Computer Language
5. Introduction to C
6. Operators and Expressions
7. Branching and Looping
8. Functions
9. Arrays and Strings
10. Structures and Union
11. Pointers
12. File Handling in C
13. C Preprocessor
14. Standard C Libraries
15. Sorting and Searching
16. Linked List
17. Stacks and Queues; Lab Assignments & Solutions, Index.

## A PRACTICAL APPROACH TO DBMS

Nazia Ahmad & Mohit Dave

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