

Analog Electronics

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Product Description

Analog Electronics is a complete and yet concise textbook on Analog Electronics covering Semiconductor Devices and associated circuits. Major topics covered in the book include Semiconductor device fundamental, Small signal and Large signal analysis of amplifiers, Low and High frequency response of amplifiers, Sinusoidal and Non-sinusoidal oscillators, feedback amplifiers, Operational amplifiers and application circuits, D/A and A/D converters and finally Switched capacitor circuits. the contents are strictly as per the syllabus as prescribed by AICTE. the book is replete with Solved problems and Self-evaluation exercises including Multiple choice question with answers.



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Chapter 1: Semiconductor Diodes-Fundamentals, Types and Circuits. Chapter 2: Bipolar Junction Transistor.

Chapter 3: Field- Effect Transistors. Chapter 4: Small Signal Analysis of Amplifiers. Chapter 5: Multistage

Amplifiers. Chapter 6: Large Signal Amplifiers. Chapter 7: Feedback Amplifiers. Chapter 8: Oscillators-

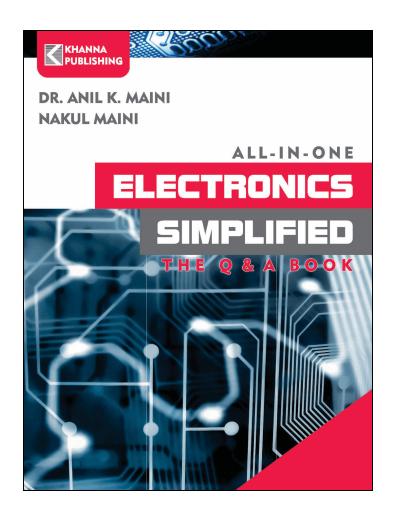
Sinusoidal and Non-Sinusoidal. Chapter 9: Introduction to Operational Amplifiers. Chapter 10: Op amp Circuits.

Chapter 11: Digital-to-Analog and Analog-to-Digital Converters. Chapter 12: Switched Capacitor Circuits. INDEX

Authors

A.K. Maini Dr. Anil K. Maini served Defence Research and Development Organization (DRDO) for 36 years in different capacities. Before superannuation, he served as Director of Laser Science and Technology Centre (DRDO) from September 2008 to Jun 2014. His areas of expertise include Optoelectronic simulators and sensors, Laser systems, Electro-optic countermeasures and High voltage electronics, He has authored and co-authored 15 books more then 150 publications in national/international journals/magazines and has 12 patents (four granted, eight pending) to his credit Currently, he is Consultant in Defence Technologies. **Varsha Agrawal** Varsha Agrawal is a Senior Scientist with DRDO. She has more than 19 year of R&D experience in Laser Systems, Optronic sensor systems and Embedded electronics. She has authored and co-authored five books and has large number of publications in national and international journals/magazines and has one patent to her credit.





All-in-One Electronics Simplified

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OBJECTIVE TYPE BOOKS

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The All-in-one Electronics Simplified is comprehensive treatise on the whole gamut of topics in Electronics in Q &A format. The book is primarily intended for undergraduate students of Electronics Engineering and covers six major subjects taught at the undergraduate level students of Electronics Engineering and covers six major subjects taught at the undergraduate level including Electronic Devices and Circuits, Network Analysis, Operational Amplifiers and Linear Integrated Circuits, Digital Electronics, Feedback and Control Systems and Measurements and Instrumentation. Each of the thirty chapters is configured as the Q&A part followed by a large number of Solved Problems. A comprehensive Self-Evaluation Exercise comprising multiple choice questions and other forms of objective type exercises concludes each chapter.



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- **Chapter 3:** Inductors and Transformers.
- Chapter 4: Hardware Electronic Components.
- Chapter 5: Network Fundamentals Network Graphs Mesh Current Analysis Node Voltage
- Analysis -RLC Transients Voltage and Current Sources Coupled.
- Chapter 6: Network Theorems.
- **Chapter 7:** Fourier Analysis of Waveform.
- **Chapter 8:** Two-Port Networks and State Equations.
- **Chapter 9:** Diodes and Transistors.
- **Chapter 10:** Field Effect Transistors.
- **Chapter 11:** UJT's and Thyristors.
- **Chapter 12:** Optoelectronic Devices.
- Chapter 13: Amplifiers.
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- **Chapter 18:** Operational Amplifiers Fundamental-Types-Characteristic Parameters .
- **Chapter 19:** Operational Amplifiers Application Circuits.
- Chapter 20: IC Timers.
- Chapter 21: Phase Locked Loops.
- Chapter 22: Digital Electronics Fundamental Number Systems and Codes-Binary Arithmetic
- Boolean Algebra and Minimization Techniques.
- Chapter 23: Logic Gates Logic Families and Combinational Logic Circuits.
- **Chapter 24:** Sequential Logic Circuits Flip Flop, Counter and Register.
- **Chapter 25:** D/A and A/D Converters.
- Chapter 26: Microprocessors an Memory Devices. Chapter 27: Programmable Logic Devices
- Proms PALs -Microcontrollers CPLDs FPGAs.
- Chapter 28: Feedback and Control Systems.
- **Chapter 29:** Electrical Measurements and Instrumentation.
- **Chapter 30:** Sensors and Transducers.



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