Digital Electronics: Principles, Devices and Applications
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**DESCRIPTION**

The fundamentals and implementation of digital electronics are essential to understanding the design and working of consumer/industrial electronics, communications, embedded systems, computers, security and military equipment.

Devices used in applications such as these are constantly decreasing in size and employing more complex technology. It is therefore essential for engineers and students to understand the fundamentals, implementation and application principles of digital electronics, devices and integrated circuits. This is so that they can use the most appropriate and effective technique to suit their technical need.

This book provides practical and comprehensive coverage of digital electronics, bringing together information on fundamental theory, operational aspects and potential applications. With worked problems, examples, and review questions for each chapter, *Digital Electronics* includes:

- information on number systems, binary codes, digital arithmetic, logic gates and families, and Boolean algebra;

- an in-depth look at multiplexers, de-multiplexers, devices for arithmetic operations, flip-flops and related devices, counters and registers, and data conversion circuits;

- up-to-date coverage of recent application fields, such as programmable logic devices, microprocessors, microcontrollers, digital troubleshooting and digital instrumentation.
A comprehensive, must-read book on digital electronics for senior undergraduate and graduate students of electrical, electronics and computer engineering, and a valuable reference book for professionals and researchers.

*ABOUT THE AUTHOR*

Anil K. Maini is a senior scientist and Associate Director at Laser Science and Technology Centre, an R&D establishment under Defence Research and Development Organization (DRDO), India. He has worked on a wide range of electronics and optoelectronic laser systems. His areas of expertise include Optoelectronic sensor systems, Laser systems, Power electronics, Digital electronics and related technologies.

He has eight books to his credit including Satellite Technology: Principles and Applications, Microwaves and Radar, Handbook of Electronics, Electronics and Communication Simplified, Electronics for Competitions, Television Technician’s Course, Electronics Projects for Beginners and Facing the Interview Board for Electronics Professionals. He has also authored about 150 technical articles and papers in national and international magazines and conferences and has two patents (Patent pending) to his credit. He is Life Fellow of Institution of Electronics and Telecommunication Engineers (IETE) and Life Member of Indian Laser Association.

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