Teach yourself electricity and electronics

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Abstrak

A fully updated, easy-to-follow guide to electricity and electronicsTeach Yourself Electricity and Electronics, Fifth Edition helps you grasp the fundamentals of electricity and electronics--including theory--without formal training. Concise content along with a conversational writing tone enhance the pedagogy. Beginners and intermediate students will benefit most, but engineers and technicians will find this work useful as well. Practical, real-world examples are included. The Fifth Edition features improved content, tables, and diagrams, plus fully revised chapter-ending quizzes, tests, and final exam. This unique book can serve as a classroom text, a refresher, and a general reference.New to the Fifth Edition: New material on emerging/advanced electronic and communications systems, including: microcontrollers, audio-frequency electronics, radio-frequency communications, optical communications, laser communications, space communications Updated presentation of integrated-circuit technology, robotics, artificial intelligence, and computer basics All-new quizzes and test questions SI units throughout Helps you to determine current, voltage, and resistance values Provides simple calculations so you can assess your own power and energy consumption Detailed coverage: Direct Current; Background Physics; Electrical Units; Measuring Devices; Direct-current Basics; Direct-current Circuit Analysis; Resistors; Cells and Batteries; Magnetism; Alternating Current; Alternating-current Basics; Inductance; Capacitance; Phase; Inductive Reactance; Capacitive Reactance; Impedance and Admittance; Alternating-current Circuit Analysis; Alternating-current Power and Resonance; Transformers and Impedance Matching; Basic Electronics; Introduction to Semiconductors; How Diodes are Used; Power Supplies; The Bipolar Transistor; The Field Effect Transistor; Amplifiers and Oscillators; Wireless Transmitters and Receivers; Digital Basics; Specialized Devices and Systems; Antennas and Transmission Lines; Integrated Circuits; Electron Tubes; Transducers, Sensors, Location, and Navigation; Acoustics, Audio, and High Fidelity; Wireless Communications Systems; Computers and Microcontrollers; Monitoring, Robotics, and Artificial Intelligence; Schematic Symbols "--Provided by publisher.

"A thorough update to this now-classic and enormously successful title, this new edition explains all the details of electricity and electronics--including theory--in the most uniquely understandable and effective way.