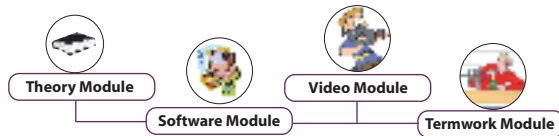


Analog & Digital Circuits



System Requirement:- IBM-PC Compatible Min P-III with Window-OS, 128 MB RAM/Multimedia Kit

Theory module

Features : Theory, Figures, Photographs, Animations With Controller, Highlighter Tool, Note Creation Facility, Systematic Page Navigation, Printing Facility.

List of Topics

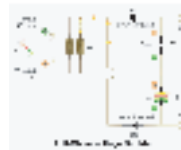
Rectifier Circuits



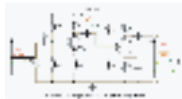
PN-Junction Diode, PN-junction With Forward & Reversed Bias, V-I Characteristic of P-N junction diode, Operating Principle, Applications of Diode, Static & Dynamic Resistance, Other Types of Diodes Symbol, Principle of Operation and Characteristics of, Photo Diode, Varactor Diode, Tunnel Diode, Point Contact Diode, Diode as Rectifier Definition of Rectifier Circuit, Rectifier Circuits -HW, FW Center Tapped and FW Bridge Type, Ripple Factor PIV, Comparison, Merits and Demerits of Different Rectifier Circuits.

Filter Circuits

Circuit Parameters Resistor, Inductor and Capacitor, Necessity of Filter Circuits, **Type of Filter Circuits :** Series Inductor Type, Shunt Capacitor Type, L-C Filter, Filter. Comparison, Merits & Demerits of Different Filters, Nature of o/p Waveform of Different Filters, Voltage Multipliers, Voltage Doubler, Tripler, & Quadrupler Circuits Using P-N Junction Diode.



Transistor Amplifiers



Introduction, Classification of Amplifiers, Single Stage Amplifiers, Graphical Explanation of Amplifiers, Practical Circuit of Amplifiers, D-C & A-C Equivalent Circuit of Amplifiers, Load Line Analysis, Multistage Amplifiers, Amplifiers Coupling, R-C coupled Transformer Coupled & Direct Coupled Amplifiers, Comparison of Different Type of Coupling, Frequency Response of Multistage Amplifiers, Gain, Bandwidth, Merits, & Demerits of Deferent coupling.

Transistor AF Power amplifiers

Transistors AF Power Amplifiers, Difference Between Voltage & Power Amplifiers, Classification of Power Amplifiers, Properties of class A, B, AB, and C Amplifiers, Comparison & their applications, Single Ended Amplifier, Push-Pull Amplifier, Complementary-Symmetry Push-Pull Circuits, Thermal-Runaway & Heatsinks.



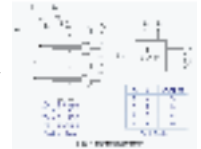
Logic Families and Integrated Circuits specification



Introduction to Logic Families, Bipolar Logic Families, Unipolar Logic Families, Characteristics of digital IC's, TTL NAND, CMOS, NAND, NOT, NOR Gates, Open Collector TTL NAND Gate, Tristate Concept, Tristate TTL NAND Gate.

Multiplexers, De-multiplexer, Encoder-Decoder

Multiplexers and Their Use in Combinational Logic Design, Combinational Logic Design Using Multiplexers, DeMultiplexer and its Use in Combinational Logic Design, Encoder- Priority Encoder, Decoder- Decoder and Drivers for Display Devices.



Flip Flops, Counters and Registers



S-R Flip-Flop, Clocked S-R Flip Flop, D Flip-Flop, T Flip-Flop, JK Flip-Flop, Edge Triggered Flip- Flop, Master-Slave Flip-Flop, Asynchronous Counter, Synchronous Counter, Decade Counter.

A/D and D/A Converters

Introduction, Digital to Analog Converter-weighted Resistor Ladder DAC, R-2R ladder DAC, Analog to Digital Converter- counter Type ADC, Successive Approximation DAC.

