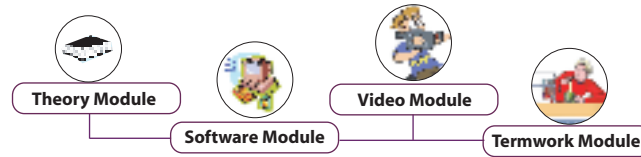


# Basic Digital Electronics



**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

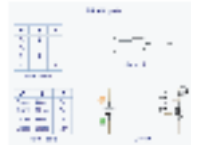
### Number System and Boolean Algebra



Decimal, Binary, and Hexadecimal Number System, Binary Coded Decimal (BCD), Binary to Decimal, and Decimal to Binary Conversion, Hex to Binary and Binary to Hex Conversion, Hex to Decimal, and Decimal to Hex Conversion, ASCII Code, Binary Arithmetic Operations.

### Basic Logic Gates

Study of NOT, OR, AND Gates, Symbols and Truth Tables, Boolean Algebra, NAND, NOR as Universal Building Blocks, DE Morgan's Theorems, Exclusive-OR Gate, Half Adder & Full Adder.



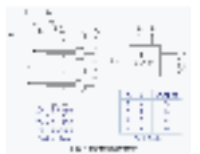
### Logic Families and Integrated Circuits specification



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



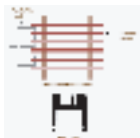
S-R Flip-Flop, Clocked S-R Flip Flop, D Flip-Flop, T Flip-Flop, JK Flip-Flop, Edge Triggered Flip-Flop, Master-Slave Flip-Flop, Asynchronous Counter, Synchronous Counter, Decade Counter.

### 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.



### Computer



Block Diagram of Computer, Concept of Bus, Study of Input / Output Devices, Study of Memory Devices, Specifications of Computer.

#### Branch offices