

**Module 1**

**Chapter 1 : Number Systems 1-1 to 1-36**

**Syllabus :** Number formats : Binary, Signed binary, Octal, Hexadecimal, BCD and their basic math operations (addition and subtraction).

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**Chapter 5 : Combinational Digital Circuits 5-1 to 5-54**

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**Module 4**

**Chapter 9 : A/D and D/A Converters 9-1 to 9-30**

**Syllabus :** Digital to analog converter : Weighed resistor converter, R-2R ladder D/A converter, Examples of D/A converter ICs, Analog to digital converter : Sample and hold circuit, Quantization and encoding, Successive approximation A/D converter, Dual slope A/D converter, Voltage to frequency and voltage to time conversion, Specifications of A/D converters, Examples of A/D converter ICs.

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**Module 5**

**Chapter 10 : Semiconductor Memories 10-1 to 10-28**

**Syllabus :** Classification and characteristics of memories, Memory organization and operation, Expanding memory size - Memory mapping and address decoding, Sequential memory, Read only memory (ROM), Read and write memory (RAM), Content addressable memory (CAM), Commonly used memory chips.

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**Module 6**

**Chapter 11 : Programmable Logic Devices**  
**11-1 to 11-22**

**Syllabus :** ROM as a programmable logic device, Programmable logic array, Programmable array logic, Complex Programmable Logic Devices (CPLDs), Field Programmable Gate Array (FPGA).

