

Syllabus: Electronics

Paper II: Digital Electronics



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2.	Logic Gates Study of NOT, OR, AND gates, symbols and truth tables - Boolean algebra - NAND, NOR as universal building blocks - De Morgan's theorems- EX-OR gates - Half Adder – Full adder
3.	Semiconductor Digital ICs Introduction to logic families – Bipolar logic families and unipolar logic families, Characteristics of Digital ICs – TTL NAND gate CMOS, NAND, NOT, NOR gates
4.	Combinational Logic Circuits Multiplexers and their use in combinational logic design – Combinational logic design using multiplexers – Demultiplexer and its use in combinational logic design– Encoder – Priority encoders Decoder and drivers for displays devices
5.	Electronic Counters S-R Flip Flop - Clocked S-R flip flop - D flip flop – T flip flop J-k flip flop– Edge triggered flip flops – Master slave concept – Ripple or Asynchronous counters Decade Counter Down counters – Ring Counter – Shift registers
6.	A/D and D/A Converters Introduction -Digital to Analog converter - Weighted resistor ladder , R-2R ladder– Analog to digital converter – Counter type ADC-Successive approximation A/D converter.
7.	Computer Fundamentals Block diagram of computer – Concepts of bus – Study of Input Output devices Study of memory devices – Specifications of PCs.