

Digital Electronics & Logic Design

Code : EC 312

Credits :3

Data and number systems, Binary representation, Codes and their conversions: BCD, Octal, Hexadecimal, ASCII, EBCDIC, Gray, Signed binary number representation with 1's and 2's complement methods, Binary arithmetic

Boolean algebra, Venn diagram, logic gates and circuits, Minimization of logic expressions by algebraic method, K-map method and Quine Mc Clauskey method

Combinational circuits- adder, subtractor, encoder, decoder, comparator, multiplexer, de-multiplexer, parity generator, etc

Design of combinational circuits-Programming logic devices and gate arrays

Sequential Circuits- Flip Flops, various types of Registers and counters and their design, Irregular counter, State table and state transition diagram, sequential circuits design methodology

Memory devices- ROM, RAM, EPROM, EEPROM, etc

Different types of A/D and D/A conversion techniques

Different Logic families- TTL, ECL, MOS and CMOS, their operation, design and specifications