

## **1. Digital Logic (CS-101)**

**(3-0-2)**

Introduction: Analog and Digital system, Active and Passive components, Number system, Binary codes, Digital Integrated Circuits: Introduction to Bipolar transistor characteristics, RTL, DTL, I<sup>2</sup>L, TTL, ECL, MOS, CMOS, Logic Families Design: Logic gates, Boolean Algebra, K-map, Map simplification Combinational Circuit Design: Half Adder, full adder, Decoders, Encoders, Magnitude comparator, Multiplexer, Read only memory, PLAs, Sequential Circuit Design: Flip-Flops, Registers, Shift Registers, Counters, Processor Logic Design: Arithmetic Circuit, Logic circuit, Accumulator, Status Register

### **References:**

1. Moris Mano, Digital Logic and Computer Design, Fundamentals, PHI, 2004.
2. T.L.Floyd and R.P.Jain, Digital Fundamentals, Pearson Education, 2007.
3. A.P.Malvino, Digital Computer Electronics, Second Edition, TMH.
4. Givone D D, Digital Principles and Design, Tata McGraw- Hill, 2002.