Paper Code: PS02CELC03	Total Credit: 4
Title Of Paper: Digital Electronics	

Unit	Description in Detail	Weightage (%)
I	Digital computer and digital systems, Binary Number, Number base conversion Octal and Hexadecimal Number, complements, Binary Codes, Binary Storage and register, Binary Logic, Integrated Circuit.	20%
II	Basic Theorem and Properties of Boolean Algebra, Minterms And Maxterms, Logic Operations, Digital Logic Gates. Different types Map method, Product of sum Simplification, NAND or NOR implementation, Don't Care condition, Tabulation method.	20%
III	Introduction to Combinational Logic, Design Procedure, adder, subtractor, Code Conversion, Universal Gate, Binary Parallel Adder, Decimal Adder, Magnitude Comparator, Decoder, Multiplexer, ROM, Programmable Logic Array.	20%
IV	Introduction to Sequential Logic, Flip-Flops, Triggering of Flip-Flops, Analysis of Clocked Sequential Circuits, State Reduction and Assignment, Flip-Flop Excitation Tables, Design Procedure, Design of Counters, Design with State Equations.	20%
V	Registers, Shift Registers, Ripple Counters, Synchronous Counters, Johnson Counter, Timing Sequences, Memory Unit.	20%

Basic Text & Reference Books:-

➢ Digital Logic and Computer Design: M Morris Mano, Prentice-Hall of India, 1992.
➢ Digital Computer Fundamentals: Bartee Thomas, McGraw- Hill, 1995.
➢ Digital Integrated Electronics: Taub and Schilling, McGraw- Hill, 1985.
➢ Modern Digital Design: Richard Sandige, McGraw-Hill, 1990.