



SYNERGY SCHOOL OF ENGINEERING

DEPARTMENT OF ELECTRICAL ENGINEERING

Discipline: Electrical Engineering	Semester: - 5 TH Sem EE	Name of the teaching faculty: - PRAJNAPARAMITA KABI
Subject: - Digital Electronics and Microprocesso r	No. of Days/week class Allotted: -3	No. of weeks: -15 SESSION-2026-2027 WINTER Starting date- 01.07.2026 Closing date- 05.11.2026
No. of week	No. of class	Topic to be Taught
1	1 ST	Number Systems – Decimal, Binary, Octal, Hexadecimal
	2 ND	1's and 2's complements, Codes –
	3 RD	Binary, BCD, Excess 3, Gray, Alphanumeric codes,
2	1 ST	Boolean theorems
	2 ND	Logic gates and truth tables, Universal gates,
	3 RD	Sum of products and product of sums,
3	1 ST	Minterms and Master's, Karnaugh map Minimization
	2 ND	QuineMcCluskey method of minimization.
	3 RD	Combinational & Synchronous Sequential Circuits
4	1 ST	Design of Half and Full Adders, Half and Full Subtractors
	2 ND	Binary Parallel Adder
	3 RD	Multiplexer, Demultiplexers,
5	1 ST	Decoders, and Priority Encoder
	2 ND	Flip flops – SR, JK, T, D,
	3 RD	Design of clocked sequential circuits –
6	1 ST	Design of Counters- Shift registers,
	2 ND	Universal Shift Register
	3 RD	Asynchronous Sequential Circuits and Memory Devices
7	1 ST	Stable and Unstable states, output specifications, cycles and races
	2 ND	State reduction, race free assignments, Hazards, Essential Hazards, Pulse mode
	3 RD	Sequential circuits, Design of Hazard free circuits
8	1 ST	Basic memory structure – ROM -PROM – EPROM – EEPROM EAPROM, RAM
	2 ND	Static and dynamic RAM – Programmable Logic Devices
	3 RD	Programmable Logic Array (PLA)
9	1 ST	Programmable Array Logic (PAL)
	2 ND	Field Programmable Gate Arrays (FPGA).
	3 RD	Introduction to 8085 microprocessors
10	1 ST	Architecture of 8085 microprocessor
	2 ND	Pin diagram of 8085 microprocessor
	3 RD	Functional Building Blocks of 8085 microprocessor
11	1 ST	Memory organization of 8085 microprocessor
	2 ND	I/O ports and data transfer concepts of 8085 microprocessor

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	3 RD	Timing Diagram of 8085 microprocessor
12	1 ST	Interrupts of 8085 microprocessor
	2 ND	Simple programme of 8085 microprocessor
	3 RD	Programming Processor of microprocessor
13	1 ST	Instruction set of 8085 microprocessors
	2 ND	Format and addressing modes of 8085 microprocessor
	3 RD	Assembly language format for 8085 microprocessors
14	1 ST	Data transfer, data manipulation & control instruction
	2 ND	Programming: ---
	3 RD	Loop structure with counting & Indexing
15	1 ST	Look up table
	2 ND	Subroutine instructions –stack
	3 RD	8255 architecture and operating modes.

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Prepared by 216126

M.M. Panda
11/06/2016

HOD EE

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ELECTRICAL ENGG. DEPT.
SSE, Dhenkanal

D. S. Meher
11/06/26
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