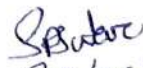
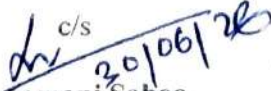


Discipline:- Electrical Engineering	Semester:- 5TH	Name of the Teaching Faculty:- Soumya Prakash Sutar, Lecturer Stage-II (Electronics)
Subject:- Digital Electronics and Microprocessor (TH1)	No of Days/per Week Class Allotted :- 03	Semester From:- 01.07.2026 to 05.11.2026
Week	ClassDay	Theory
1ST	1	Digital Fundamentals : Number Systems – Decimal, Binary, Octal, Hexadecimal
	2	1's and 2's complements, Codes – Binary, BCD, Excess 3
	3	Gray, Alphanumeric codes, Boolean theorems
2ND	1	Logic gates and truth tables, Universal gates
	2	Sum of products and product of sums, Minterms and Maxterms
	3	Karnaugh map Minimization(2 and 3 variable)
3RD	1	Karnaugh map Minimization (4 variable)
	2	Quine McCluskey method of minimization
	3	Combinational & Synchronous Sequential Circuits: Design of Half and Full Adders
4TH	1	Design of Half and Full Subtractors
	2	Binary Parallel Adder ,Multiplexer , Demultiplexers
	3	Decoders and Priority Encoder.
5TH	1	Flip flops – SR, JK, T, D,
	2	design of clocked sequential circuits
	3	Design of Counters
6TH	1	Shift registers , Universal Shift Register
	2	Asynchronous Sequential Circuits And Memory Devices : Stable and Unstable states, output specifications, cycles and races
	3	state reduction, race free assignments
7TH	1	Hazards, Essential Hazards
	2	Pulse mode sequential circuits, Design of Hazard free circuits

	3	Basic memory structure – ROM - PROM – EPROM
8 TH	1	EEPROM –EAPROM, RAM – Static and dynamic RAM
	2	Programmable Logic Devices – Programmable Logic Array (PLA)
	3	Programmable Array Logic (PAL)
9 TH	1	Field Programmable Gate Arrays (FPGA)
	2	8085 Processor :Hardware Architecture
	3	pin diagram
10 TH	1	pin diagram description
	2	Functional Building Blocks of Processor
	3	Memory organization
11 TH	1	I/O ports and data transfer concepts
	2	Timing Diagram
	3	Interrupts
12 TH	1	Programming Processor: Instruction – format
	2	Addressing modes of 8085
	3	Assembly language format – Data transfer
13 TH	1	data manipulation
	2	control instructions
	3	Programming : Loop structure with counting & Indexing
14 TH	1	Programming :Look up table
	2	Programming :stack
	3	8255 architecture
15 TH	1	Operating modes of 8255.
	2	Discussion on Important Questions for Semester Examination
	3	Discussion on Important Questions for Semester Examination


 30/06/2026
 Soumya Prakash Sutar
 Lecturer Stage-II (Electronics)

c/s

 Suryamani Sahoo
 Sr. Lecturer (Electrical)