

ELECTRICAL ENGG	5TH	NAME OF THE TEACHING FACULTY- NIHARIKA SETHY, LECT(ETC.)	
SUB-DE & MP	No Of Days Per Week Class Alloted-5	01.07.2024 TO 08.11.2024 NO OF WEEK – 15 WEEKS	
WEEK	CLASS DAY	THEORY	STATUS
1 ST WEEK	1 ST day 2 nd day 3 rd day 4 th day 5th	Binary, Octal number systems and Hexadecimal number systems and Compare with Decimal system. Binary addition, subtraction, Multiplication and Division. 1's complement and 2's complement numbers for a binary number Subtraction of binary numbers in 2's complement method	
2 nd WEEK	1 ST day 2 nd day 3 rd day 4 th day 5th	Use of weighted and Un-weighted & codes Write Binary equivalent number for a, number in 8421 Excess-3 and Gray Code and vice-versa. Importance of parity Bit Logic Gates: AND, OR, NOT with truth table NAND, NOR and EX-OR gates with truth table	
3 RD WEEK	1 ST day 2 nd day 3 rd day 4 th day 5th	Realize AND, OR, NOT operations using NAND, NOR gates Different postulates and De-Morgan's theorems. Boolean algebra. Use Of Boolean Algebra For Simplification Of Logic Expression.	
4 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day 5th	POS Logic Expression and SOP Logic Expression Karnaugh Map Karnaugh Map For 2,3,4 Variable, Simplification Of SOP And POS Logic Expression Using K-Map.	
5 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day 5th	Give the concept of combinational logic circuits. Half adder circuit , Full adder circuit and verify its functionality using truth table.. Half Subtractor and full subtractor explain its operation with truth table	

		Multiplexer, De multiplexer	
6 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day 5 th	Encoder, Decoder Give the idea of Sequential logic circuits. State the necessity of clock and give the concept of level clocking and edge triggering Clocked SR-flip flop with preset and clear inputs	
7 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day 5 th	Construct level clocked JK flip flop using S-R flip-flop and explain with truth table JK flip flop using S-R flip-flop Concept of race around condition study of master slave JK flip flop	
8 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day 5 th	Give the truth tables of edge triggered D and T flip flops and draw their symbols. Applications of flip flops. Introduction of counter. Define modulus of a counter 4-bit synchronous counter and its timing diagram.	
9 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day 5 th	Asynchronous decade counter, 4-bit synchronous counter Distinguish between synchronous and asynchronous counters State the need for a Register and list the four types of registers. Working of SISO, SIPO, PISO, PIPO Register with truth table using flip flop.	
10 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day 5 th	Introduction to Microprocessors, Microcomputers Architecture of Intel 8085 A Microprocessor and description of each block Architecture of Intel 8085 A Microprocessor and description of each block Pin diagram and description of 8085 Instruction set of 8085MP.	
11 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day 5 th	Subroutine. Stack, Stack pointer & stack top Interrupts Opcode & Operand, Differentiate between one byte, two byte &	Extra classes needed to complete the syllabus

		Three byte instruction
12 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	Differentiate between one byte, two byte & three byte instruction with Addressing mode. Timing Diagram Machine Cycle, Instruction Cycle, T-State
13 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	Fetch Cycle, Timing Diagram for memory read, memory write, I/O read, I/O write. Timing Diagram for 8085 instruction Counter and time delay Simple assembly language programming of 8085 Simple assembly language programming of 8085
14 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	Basic Interfacing Concepts, Memory mapping & I/O mapping Functional block diagram of Intel 8255 Description of each block of Programmable peripheral Interface Intel 8255 Application using 8255
15 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	Seven segment LED display Square wave generator Traffic light Controller Doubt clearing class Semester question discussion

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