

Lesson Plan

2023(w)

Subject:-**DE&M(Code) TH-3** Name of faculty:


Bikram Keshari Parida

Semester:-**5th** Class allotted:-**5p/w** Branch :- **Electrical Engg.**

Discipline	Semester:-5th	From date:-01/08/23 To date:30/11/23	Teaching Aid
Subject:	No. of days/ per week 5p/w	Theory/ Practical –Topics/Lesson	
Week	Date/Period		
1	01/08/23 to 05/08/23	1.1 Binary, Octal, Hexadecimal number systems and compare with Decimal system. Binary addition, subtraction, Multiplication and Division. 1.3 1's complement and 2's complement numbers for a binary number 1.4 Subtraction of binary numbers in 2's complement method.	White board & marker
2	07/08/23 to 12/08/23	1.5 Use of weighted and Un-weighted codes & write Binary equivalent number for a number in 8421, Excess-3 and Gray Code and vice-versa. 1.6 Importance of parity Bit. 1.7 Logic Gates: AND, OR, NOT, NAND, NOR and EX-OR gates with truth table.	White board & marker
3	14/08/23 to 19/08/23	1.7 Logic Gates: AND, OR, NOT, NAND, NOR and EX-OR gates with truth table. 1.8 Realize AND, OR, NOT operations using NAND, NOR gates. 1.9 Different postulates and De-Morgan's theorems in Boolean algebra.	White board & marker
4	21/08/23 to 26/08/23	1.10 Use Of Boolean Algebra For Simplification Of Logic Expression 1.11 Karnaugh Map For 2,3,4 Variable, Simplification Of SOP And POS Logic Expression Using K-Map.	White board & marker
5	28/08/23 to 02/09/23	2. COMBINATIONAL LOGIC CIRCUITS 2.1 Give the concept of combinational logic circuits. 2.2 Half adder circuit and verify its functionality using truth table. 2.3 Realize a Half-adder using NAND gates only and NOR gates only. 2.4 Full adder circuit and explain its operation with truth table.	White board & marker
6	04/09/23 to 09/09/23	2.5 Realize full-adder using two Half-adders and an OR – gate and write truth table 2.6 Full subtractor circuit and explain its operation with truth table.	White board & marker
7	11/09/23 to 16/09/23	2.7 Operation of 4 X 1 Multiplexers and 1 X 4 demultiplexer 2.8 Working of Binary-Decimal Encoder & 3 X 8 Decoder. 2.9 Working of Two bit magnitude comparator.	White board & marker
8	18/09/23 to 23/09/23	3. SEQUENTIAL LOGIC CIRCUITS 3.1 Give the idea of Sequential logic circuits. 3.2 State the necessity of clock and give the concept	White board & marker

		of level clocking and edge triggering, 3.3 Clocked SR flip flop with preset and clear inputs. 3.5 Construct level clocked JK flip flop using S-R flip-flop and explain with truth table	
9	25/09/23 to 30/09/23	3.6 Concept of race around condition and study of master slave JK flip flop. 3.7 Give the truth tables of edge triggered D and T flip flops and draw their symbols. 3.8 Applications of flip flops. 3.9 Define modulus of a counter	White board & marker
10	03/10/23 to 07/10/23	3.10 4-bit asynchronous counter and its timing diagram. 3.11 Asynchronous decade counter. 3.12 4-bit synchronous counter.	White board & marker
11	09/10/23 to 14/10/23	3.13 Distinguish between synchronous and asynchronous counters. 3.14 State the need for a Register and list the four types of registers. 3.15 Working of SISO, SIPO, PISO, PIPO Register with truth table using flip flop.	White board & marker
12	16/10/23 to 20/10/23	4. 8085 MICROPROCESSOR 4.1 Introduction to Microprocessors, Microcomputers 4.2 Architecture of Intel 8085A Microprocessor and description of each block. 4.3 Pin diagram and description.	White board & marker & smart board
13	30/10/23 to 04/11/23	4.4 Stack, Stack pointer & stack top 4.5 Interrupts 4.6 Opcode & Operand, 4.7 Differentiate between one byte, two byte & three byte instruction with example. 4.8 Instruction set of 8085 example	White board & marker
14	06/11/23 to 11/11/23	4.9 Addressing mode 4.10 Fetch Cycle, Machine Cycle, Instruction Cycle, T-State 4.11 Timing Diagram for memory read, memory write, I/O read, I/O write	White board & marker
15	13/11/23 to 18/11/23	4.12 Timing Diagram for 8085 instruction 4.13 Counter and time delay. 4.14 Simple assembly language programming of 8085.	White board & marker & smart board
16	20/11/23 to 25/11/23	5.1 Basic Interfacing Concepts, Memory mapping & I/O mapping 5.2 Functional block diagram and description of each block of Programmable peripheral interface Intel 8255	White board & marker
17	28/11/23 to 30/11/23	5.3 Application using 8255: Seven segment LED display, Square wave generator, Traffic light Controller	White board & marker


Signature of HOD


Signature of faculty