BALASORE SCHOOL OF ENGINEERING

LESSON PLAN FOR 5TH SEMESTER

SESSION - 2022-23

ranch:-Electrical Engineering | SEMESTER: - 5TH

UBJECT:- Digital electronics & Microprocessor | THEORY - 03

ame of the Teacher:- Er. B.D. PANDA. | (Sec- B)

PRIORITY OF CHAPTER

Sl. No	Ch. No	Month	Date	Name of the Chapter/ Objectives	No. of periods required as per syllabus	No. of periods available as per plan
				1. BASICS OF DIGITAL ELECTRONICS		
1,2			1/8/2023 & 3/8/2023	1.1 Binary, Octal, Hexadecimal number systems and compare with Decimal system.		
3,4			4/8/2023 & 5/8/2023	1.2 Binary addition, subtraction, Multiplication and Division.		
5			8/8/2023	1.3 1's complement and 2's complement numbers for a binary number		
6			10/8/2023	1.4 Subtraction of binary numbers in 2's complement method.		
7			11/8/2023	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.	15	14
8			12/8/2023	1.6 Importance of parity Bit.		
				1.7 Logic Gates: AND, OR, NOT, NAND, NOR and EX-OR gates with truth table.		
9			17/8/2023	1.8 Realize AND, OR, NOT operations using NAND, NOR gates.		
10		AUG	18/8/2023	1.9 Different postulates and De-Morgan's theorems in Boolean algebra.		
11, 12			19/8/2023 & 21/8/2023	1.10 Use Of Boolean Algebra For Simplification Of Logic Expression		
13, 14			22/8/2023 & 24/8/2023	1.11 Karnaugh Map For 2,3,4 Variable, Simplification Of SOP And POS Logic Expression Using K-Map.		
		2		**2. COMBINATIONAL LOGIC CIRCUITS**		
15			25/8/2023	2.1 Give the concept of combinational logic circuits.		
				2.2 Half adder circuit and verify its functionality using truth table.		

16			26/8/2023	2.3 Realize a Half-adder using NAND gates only and NOR gates only.	
17			28/8/2023	2.4 Full adder circuit and explain its operation with truth table.	
18			29/8/2023	2.5 Realize full-adder using two Half-adders and an OR – gate and write truth table	**15**
19			31/8/2023	2.6 Full subtractor circuit and explain its operation with truth table.	**8**
20			1/9/2023	2.7 Operation of 4 X 1 Multiplexers and 1 X 4 demultiplexer	
21			2/9/2023	2.8 Working of Binary-Decimal Encoder & 3 X 8 Decoder.	
22			4/9/2023	2.9 Working of Two bit magnitude comparator.	
23			5/9/2023	**CLASS TEST**	
	3			**3. SEQUENTIAL LOGIC CIRCUITS**	
24			7/9/2023	3.1 Give the idea of Sequential logic circuits.	
				3.2 State the necessity of clock and give the concept of level clocking and edge triggering,	
25			8/9/2023	3.3 Clocked SR flip flop with preset and clear inputs.	
26			9/9/2023	3.5 Construct level clocked JK flip flop using S-R flip-flop and explain with truth table	
27			11/9/2023	3.6 Concept of race around condition and study of master slave JK flip flop.	
28			12/9/2023	3.7 Give the truth tables of edge triggered D and T flip flops and draw their symbols.	**15**
29		***SEPT***	14/9/2023	3.8 Applications of flip flops.	**10**
				3.9 Define modulus of a counter	
30			15/9/2023	3.10 4-bit asynchronous counter and its timing diagram.	
31			16/9/2023	3.11 Asynchronous decade counter.	
				3.12 4-bit synchronous counter.	
32			21/9/2023	3.13 Distinguish between synchronous and asynchronous counters.	
				3.14 State the need for a Register and list the four types of registers.	
33			22/9/2023	3.15 Working of SISO, SIPO, PISO, PIPO Register with truth table using flip flop.	
	4			**4. 8085 MICROPROCESSOR**	
34, 35			23/9/2023 & 25/9/2023	4.1 Introduction to Microprocessors, Microcomputers	
				4.2 Architecture of Intel 8085A Microprocessor and description of each block.	
36			26/9/2023	4.3 Pin diagram and description.	

37			28/9/2023	4.4 Stack, Stack pointer & stack top	20	15
38			29/9/2023	4.5 Interrupts		
39			30/9/2023	4.6 Opcode & Operand, 4.7 Differentiate between one byte, two byte & three byte instruction with example.		
40			3/10/2023	4.8 Instruction set of 8085 example		
41			5/10/2023	4.9 Addressing mode		
42			6/10/2023	4 .10 Fetch Cycle, Machine Cycle, Instruction Cycle, T-State		
43			7/10/2023	4.11 Timing Diagram for memory read, memory write, I/O read, I/O write		
44			9/10/2023	4.12 Timing Diagram for 8085 instruction		
45			10/10/2023	4.13 Counter and time delay.		
46, 47, 48		**OCT**	12/10/2023 & 13/10/2023 & 14/10/2023	4. 14 Simple assembly language programming of 8085.		
49			30/10/2023	**CLASS TEST**		
	5			**5. INTERFACING AND SUPPORT CHIPS**	**10**	**5**
50, 51			31/10/2023 & 2/11/2023	5.1 Basic Interfacing Concepts, Memory mapping & I/O mapping		
52			3/11/2023	5.2 Functional block diagram and description of each block of Programmable peripheral interface intel 8255		
53		**NOV**	4/11/2023			
54			6/11/2023	5.3 Application using 8255: Seven segment LED display, Square wave generator, Traffic light controller		

Month		Chapter	Remark
AUG		Ch-1,CH-2.6	
SEPT		CH-2.7,CH-3,CH-4.7	
OCT		Ch-4.8-CH-4.14	
NOV		Ch-5	

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