

**UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA**

**Department of ELECTRICAL ENGINEERING**

**Academic Lesson Plan for 5TH Semester – 2023-24 (Winter)**

**Subject: DIGITAL ELECTRONICS & MICROPROCESSOR LAB (PR 3)**

**Name of the teaching faculty- Miss Sarita Bauri,PTGF( Electrical Engg.)**

<b>SEMESTER FROM</b> <b>DATE:01/08/2023 TO</b> <b>DATE:30/11/2023</b>	<b>No. of periods per week: 3</b> <b>NO.OF WEEKS:15</b> <b>Total periods: 45</b>	<b>Sessional Exam. : 25 Marks</b> <b>End Semester Exam.: 50 Marks</b> <b>Total Marks: 75 Marks</b>
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WEEK	CLASS DAY	UNIT	THEORY/PRACTICAL TOPICS	REMARK
1ST	1ST	EXPERIMENT 1	Verify truth tables of AND, OR, NOT, NOR, NAND, XOR, XNOR gates.	
	2ND			
	3RD			
2ND	1ST	EXPERIMENT 2	Implement various gates by using universal properties of NAND & NOR gates and verify truth table.	
	2ND			
	3RD			
3RD	1ST	EXPERIMENT 3	Implement half adder and Full adder using logic gates.	
	2ND			
	3RD			
4TH	1ST	EXPERIMENT 4	Implement half subtractor and Full subtractor using logic gates.	
	2ND			
	3RD			
5TH	1ST	EXPERIMENT 5	Implement a 4-bit Binary to Gray code converter.	
	2ND			
	3RD			
6TH	1ST	EXPERIMENT 6	Implement a Single bit digital comparator.	
	2ND			
	3RD			
7TH	1ST	EXPERIMENT 7	Study Multiplexer and demultiplexer.	
	2ND			
	3RD			
8TH	1ST	EXPERIMENT 8	Study of flip-flops. i) S-R flip flop ii) J-K flip flop iii) flip flop iv) T flip flop	
	2ND			
	3RD			
9TH	1ST	EXPERIMENT 9	Realize a 4-bit asynchronous UP/Down counter with a control for up/down counting.	
	2ND			
	3RD			
10 <sup>TH</sup>	1ST	EXPERIMENT 10	Realize a 4-bit synchronous UP/Down counter with a control for up/down counting.	
	2ND			
	3RD			
11TH	1ST	EXPERIMENT 11	Implement Mode-10 asynchronous counters.	
	2ND			
	3RD			
12TH	1ST	EXPERIMENT 12	Study shift registers.	
	2ND			
	3RD			
13TH	1ST	GENERAL	1'S Complement. b. 2'S Complement. 2. a.	

	<i>2ND</i>	PROGRAMMING USING 8085A DEVELOPMENT BOARD	Addition of 8-bit number. b. Subtraction of 8-bit number resulting 8/16 bit number.	
	<i>3RD</i>			
<i>14TH</i>	<i>1ST</i>	GENERAL PROGRAMMING USING 8085A DEVELOPMENT BOARD	Decimal Addition 8-bit number. b. Decimal Subtraction 8-bit number 3. a. Compare between two numbers. b. Find the largest in an Array	
	<i>2ND</i>			
	<i>3RD</i>			
<i>15TH</i>	<i>1ST</i>	GENERAL PROGRAMMING USING 8085A DEVELOPMENT BOARD	Block Transfer.	
	<i>2ND</i>			
	<i>3RD</i>			