

Name of the Faculty: **Bharti Sethi, Assistant Professor**  
 Discipline : **Computer Science and Engineering**  
 Semester : **4th**

Subject : **Microprocessor And Interfacing and Microprocessor And Interfacing Lab**  
 Lesson Plan Duration: 15 Weeks (from feb 2024 to july 2024)

**Work load (Lecture/Practical per week in hours: Lectures-03, Practical-02**

Week	Theory		Practical	
	Lecture day	Topic(including assignment/test)	Practical day	Topic
1	1	Introduction to microprocessor	1	Study of 8085 Microprocessor kit.
	2	8085 microprocessor architecture		
	3	Instruction set		
2	4	Architecture of 8086	2	Write a program using 8085 and verify for : a. Addition of two 8-bit numbers. b. Addition of two 8-bit numbers (with carry).
	5	Block diagram of 8086		
	6	Details of sub-blocks		
3	7	BIU	3	Write a program using 8085 and verify for : a. 8-bit subtraction (display borrow) b. 16-bit subtraction (display borrow)
	8	Memory segmentation		
	9	Physical address computation		
4	10	Addressing modes	4	Write a program using 8085 for multiplication of two 8-bit numbers by repeated addition method. Check for minimum number of additions and test for typical data.
	11	Instruction formats		
	12	Pin diagram		
5	13	Assembler instruction format		
	14	Data transfer instructions		
	15	Arithmetic instructions		
6	16	Branch instructions	6	<b>First viva-voce</b>
	17	Looping instructions		
	18	Flag manipulation instructions		
7		<b>I st Minor Test</b>		Write a program using 8085 for division of two 8-bit numbers by repeated subtraction method and test for typical data.
8	19	Shift instructions	7	Study of 8086 microprocessor kit
	20	Rotate instructions		
	21	Directive		
9	22	<b>Assignment Questions</b>	8	Write a program using 8086 for division of a defined double word (stored in a data segment) by another double Word division and verify.
	23	Programming examples		
	24	Programming with an Assembler		
10	25	Programming examples	9	Write a program using 8086 for finding the square root of a given number and verify.
	26	Coding style		
11	27	Introduction to Stack	10	Write a program using 8086 for copying 12 bytes of data from source to destination and verify
	28	Stack Structure of 8086		
	29	Introduction to Subroutines		
12	30	MACROS	11	Write a program using 8086 and verify for: a. Finding the largest number from an array. b. Finding the smallest number from an array.
	31	BIOS(Basic Input/output System)		
	32	DOS(Disk Operating System)		
13	33	Architecture	12	Write a program using 8086 for arranging an array of numbers in descending order and verify.
	34	Modes and examples		
	35	Introduction to DMA process		
14		<b>IInd Minor Test</b>		
15	36	8237 DMA controller	13	<b>Second viva-voce</b>
	37	<b>Assignment Evaluation</b>		
	38	8259 Programmable interrupt controller		

