LESSON PLAN

NAME OF FACULTY: MRS. SUMAN CHAUDHARY

DISCIPLINE: COMPUTER ENGINEERING

SEMESTER: 4TH

SUBJECT: MICROPROCESSORS AND PERIPHERAL DEVICES

LESSON PLAN DURATION: 16 WEEKS

WORK LOAD (LECTURE/ PRACTICAL): LECTURES-3, PRACTICALS -3

WEEK	THEORY		PRACTICAL	
1st	LECTURE DAY	TOPIC	PRACTICAL DAY/PERIOD	TOPIC
	1	**UNIT 1 EVOLUTION OF MICROPROCESSOR** Typical organization of a microcomputer system and functions of its various blocks		
	2	Microprocessor, its evolution	1-3	Familiarization of different keys of 8085 microprocessor kit and its memory map
	3	Function and impact on modern society		
2nd	1	**UNIT 2 ARCHITECTURE OF A MICROPROCESSOR (WITH REFERENCE TO 8085 MICROPROCESSOR)** Concept of Bus, bus organization of 8085	1-3	
	2	Functional block diagram of 8085 and function of each block		
	3	Pin details of 8085 and related signals		
3rd	1	Demultiplexing of address/data bus		
	2	Generation of read/write control signals	1-3	Steps to enter, modify data/program and to execute a programme on 8085 kit
	3	Steps to execute a stored programme		
4th	3	**UNIT 3 INSTRUCTION TIMING AND CYCLES** Instruction cycle		
	1	Machine cycle	1-3	Writing and execution of ALP for addition and subtraction of two 8 bit numbers
	2	T-states		
5th	1	Fetch cycle	1-3	Writing and execution of ALP for arranging 10 numbers in ascending/descending order
	2	Execute cycle		
	3	**TEST**		
6th	1	**UNIT 4 PROGRAMMING (WITH RESPECT TO 8085 MICROPROCESSOR)** Brief idea of machine and assembly languages		

	2	Machines and Mnemonic codes		
	3	Instruction format and Addressing mode	1-3	Writing and execution of ALP for multiplication and division of two 8 bit numbers)
7th	**1**	Identification of instructions as to which addressing mode they belong		
	2	Concept of Instruction set.		
	3	Explanation of the instructions of the following groups of instruction set - Data transfer group	1-3	Writing and execution of ALP for 0 to 9 BCD counters (up/down counter according to choice stored in memory
8th	**1**	Arithmetic Group		
	2	Logic Group		
	3	Stack	1-3	Interfacing exercise on 8255 like LED display control
9th	**1**	I/O and Machine Control Group		
	2	Programming exercises in assembly language	1-3	Interfacing exercise on 8253 programmable interval timer
	3	**UNIT 5 MEMORIES AND I/O INTERFACING** Concept of memory mapping		
10th	**1**	partitioning of total memory space		
	2	Address decoding	1-3	Practicing Programs on kit
	3	concept of peripheral mapped I/O		
11th	**1**	memory mapped		
	2	I/O Interfacing of memory mapped I/O devices	1-3	Practicing Programs on kit
	3	I/O Interfacing of memory mapped I/O devices		
12th	**1**	**UNIT 6 INTERRUPTS** Concept of interrupt, Maskable and non-maskable	1-3	Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
	2	Edge triggered and level triggered interrupts, Software interrupt, Restart interrupts and its use		
	3	Various hardware interrupts of 8085, Servicing interrupts, extending interrupt system		
13th	**1**	**TEST**		
	2	**UNIT 7 DATA TRANSFER TECHNIQUES** Concept of programmed I/O operations, sync data transfer	1-3	Use of 8085 emulator for hardware testing
	3	Async data transfer (hand shaking),		
14th	**1**	Interrupt driven data transfer, DMA		
	2	Serial output data, Serial input data	1-3	Revision of Practicals
	3	**UNIT 8 PERIPHERAL DEVICES** 8255 PPI, 8253 PIT		

15th	**1**	8257 DMA controller		
	2	**UNIT 9 ARCHITECTURE OF 8086 MICROPROCESSOR** Block diagram - Minimum and Maximum mode	1-3	Revision of Practicals
	3	Pin and Signals		
16th	**1**	**TEST**		
	2	**REVISION**	1-3	Revision of Practicals
	3	**REVISION**		