

LESSION PLAN

NAME OF THE FACULTY : MANITA

DISCIPLINE : ECE

SEMESTER : FOURTH

SUBJECT : MPD

LESSON PLAN DURATION : 15 weeks

WORK LOAD (LECTURE/PRACTICAL) PER WEEK (IN HOURS):- LECTURE-04/ PRACTIACL-06

WEEK	THEORY		PRACTICAL	
	LECTURE DAY	TOPIC (including assignment/test)	PRACTICAL DAY	TOPIC
1 st	1 st	Typical organization of a microcomputer system and functions of its various blocks.	1 st Group-1	Familiarization of different keys of 8085 microprocessor kit and its memory map
	2 nd	Typical organization of a microcomputer system and functions of its various blocks.		
	3 rd	Microprocessor:- its evolution & function	2 nd Group-2	Familiarization of different keys of 8085 microprocessor kit and its memory map
2 nd	4 th	Microprocessor:- its impact on modern society	3 rd Group-1	Steps to enter, modify data/program and to execute a programme on 8085 kit
	5 th	Architecture of a Microprocessor (Withreference to 8085 microprocessor) :- Introduction		
	6 th	Concept of Bus	4 th Group-2	Steps to enter, modify data/program and to execute a programme on 8085 kit

3 rd	7 th	Bus organization of 8085	5 th Group-1	Writing and execution of ALP for addition and subtraction of two 8 bit numbers
	8 th	Functional block diagram of 8085		
	9 th	Function of each block of 8085	6 th Group-2	Writing and execution of ALP for addition and subtraction of two 8 bit numbers
4 th	10 th	Pin details of 8085 and related signals	7 th Group-1	REVISION
	11 th	Demultiplexing of address/data bus generation of read/write control signals		
	12 th	Demultiplexing of address/data bus generation of read/write control signals	8 th Group-2	REVISION
5 th	13 th	Steps to execute a stored programme	9 th Group-1	Writing and execution of ALP for multiplication and division of two 8 bit numbers
	14 th	• Class Test • assignment		
	15 th	Instruction Timing and Cycles :- Introduction	10 th Group-2	Writing and execution of ALP for multiplication and division of two 8 bit numbers
6 th	16 th	Instruction cycle	11 th Group-1	Writing and execution of ALP for arranging 10 numbers in ascending/descending order
	17 th	Machine cycle		

	18 th	T-states	12 th Group-2	Writing and execution of ALP for arranging 10 numbers in ascending/descending order
7 th	19 th	Fetch and execute cycle.	13 th Group-1	Writing and execution of ALP for 0 to 9 BCD counters (up/down counter according to choice stored in memory)
	20 th	Fetch and execute cycle.		
	21 th	Programming (with respect to 8085 microprocessor) :- Introduction	14 th Group-1	Writing and execution of ALP for 0 to 9 BCD counters (up/down counter according to choice stored in memory)

8 th	22 th	Brief idea of machine and assembly languages	15 th Group-1	REVISION
	23 th	Machines and Mnemonic codes		
	24 th	Instruction format and Addressing mode	16 th Group-2	REVISION
9 th	25 th	Identification of instructions as to which addressing mode they belong	17 th Group-1	Interfacing exercise on 8255 like LED display control
	26 th	Concept of Instruction set		
	27 th	Explanation of the instructions of the following groups of instruction set	18 th Group-2	Interfacing exercise on 8255 like LED display control

10 th	28 th	Data transfer group, Arithmetic Group, Logic Group, Stack, I/O and Machine Control Group	19 th Group-1	Interfacing exercise on 8253 programmable interval timer
	29 th	Data transfer group, Arithmetic Group, Logic Group, Stack, I/O and Machine Control Group		
	30 th	Programming exercises in assembly language. (Examples can be taken from the list of experiments).	20 th Group-2	Interfacing exercise on 8253 programmable interval timer
11 th	31 th	Programming exercises in assembly language. (Examples can be taken from the list of experiments).	21 th Group-1	Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
	32 th	Memories and I/O interfacing:- Introduction		
	33 th	Concept of memory mapping, partitioning of total memory space, Address decoding	22 th Group-2	Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
12 th	34 th	Concept of peripheral mapped I/O and memory mapped I/O , Interfacing of memory mapped I/O devices	23 th Group-1	REVISION
	35 th	• Class Test • assignment		
	36 th	Interrupts:- Concept of interrupt, Maskable and non-maskable, Edge triggered and level triggered interrupts, Software interrupt, Restart interrupts and its use.	24 th Group-2	REVISION
13 th	37 th	Various hardware interrupts of 8085, Servicing interrupts, extending interrupt system	25 th Group-1	Use of 8085 emulator for hardware testing

	38 th	Data Transfer Techniques:- Concept of programmed I/O operations,		
	39 th	sync data transfer, async data transfer (hand shaking),	26 th Group-2	Use of 8085 emulator for hardware testing
14 th	40 th	Interrupt driven data transfer, DMA, Serial output data, Serial input data	27 th Group-1	Test
	41 th	Peripheral devices:- 8255 PPI, 8253 PIT and		
	42 th	8257 DMA controller	28 th Group-2	Test
15 th	43 th	Architecture of 8086 Microprocessor:- Block diagram	29 th Group-1	Test
	44 th	Architecture of 8086 Microprocessor :- - Minimum and Maximum mode - Pin and Signals		
	45 th	- assignment - Class Test	30 th Group-2	Test