

Lesson Plan

Name of the Faculty : MONIKA GUPTA

Discipline : COMPUTER ENGG.

Semester : 4th

Subject : MPD

Lesson plan duration : 15 weeks (from 6march,2023 to 23 June 2023)

Week	Theory		Practical	
	LectureDay	Topic(including assignments/tests)	Practical Day	Topic
1 st Week	1 st	Evolution of Microprocessor: Typical organization of amicrocomputer systemand functions of itsvariousblocks.	1 st -G1	Familiarization ofdifferent keys of 8085microprocessor kit andits memorymap
	2 nd	Microprocessor,its evolution&function		
	3 rd	Its impact on modernsociety Assignment onorganization ofmicrocomputer&Test	2 nd -G2	Familiarization ofdifferent keys of 8085microprocessor kit andits memorymap
Week2	1 st	Architecture of aMicroprocessor :ConceptofBus,bus organizationof8085	1 st -G1	Steps to enter, modifydata/program and toexecute a programmeon8085kit
	2 nd	Functionalblock diagramof8085		
	3 rd	function of each blockPindetailsof8085	2 nd -G2	Steps to enter, modifydata/program and toexecuteaprogramme on8085kit
Week3	1 st	Pindetailsof8085 and related signals,	1 st -G1	Writing and execution ofALP for addition and substationoftwo8 bit numbers
	2 nd	Demultiplexingof address/databus		

	3 rd	Generation of read/write control signals Steps to execute a stored Programme	2 nd -G2	Writing and execution of ALP for addition and subtraction of two 8 bit numbers
Week4	1 st	Revision of Functional block diagram of 8085	1 st -G1	Writing and execution of ALP for multiplication
	2 nd	Revision of Pin diagram		
	3 rd	Test	2 nd -G2	Writing and execution of ALP for multiplication
Week5	1 st	Instruction Timing and Cycles : Instruction cycle, machine cycle and T-states	1 st -G1	Writing and execution of ALP for division of two 8 bit numbers
	2 nd	Fetch and execute cycle		
	3 rd	Programming (with respect to 8085 microprocessor) : Brief idea of machine and assembly languages REVISION AND TEST	2 nd -G2	Writing and execution of ALP for division of two 8 bit numbers
Week6	1 st	Machines and Mnemonic codes	1 st -G1	Writing and execution of ALP for arranging 10 numbers in ascending order
	2 nd	Instruction format and Addressing mode, Identification of instructions as to which addressing mode they belong.		
	3 rd	Concept of Instruction set. Explanation of the instructions of the following groups of instruction set	2 nd -G2	Writing and execution of ALP for arranging 10 numbers in ascending order
Week7	1 st	Data transfer instructions	1 st -G1	Writing and execution of ALP for arranging 10 numbers in descending order
	2 nd	Arithmetic instructions		
	3 rd	Arithmetic instructions, Logical Instructions	2 nd -G2	Writing and execution of ALP for arranging 10 numbers in descending order
Week8	1 st	Logical Instructions	1 st -G1	Writing and execution of ALP for 0 to 9 BCD

	2 nd	Stack related instructions		counters (up/down counter according to choice stored in memory)
	3 rd	Machine Control Group, Programming exercises in assembly language.	2 nd -G2	Writing and execution of ALP for 0 to 9 BCD counters (up/down counter according to choice stored in memory)
Week9	1 st	Programming exercises in assembly language.	1 st -G1	Interfacing exercise on 8255 like LED display control
	2 nd	Assignment on Assembly Language Programming		
	3 rd	Revision & Test Memories and I/O interfacing: Concept of memory mapping	2 nd -G2	Interfacing exercise on 8255 like LED display control
Week10	1 st	Partitioning of total memory space	1 st -G1	Interfacing exercise on 8253 programmable interval timer
	2 nd	Address decoding		
	3 rd	concept of peripheral mapped I/O and memory mapped I/O	2 nd -G2	Interfacing exercise on 8253 programmable interval timer
Week11	1 st	Interfacing of memory mapped I/O devices.	1 st -G1	Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
	2 nd	Interfacing of memory mapped I/O devices.		
	3 rd	Assignment on Memory Mapping with different examples	2 nd -G2	Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
Week12	1 st	Interrupts: Concept of interrupt	1 st -G1	Use of 8085 emulator for hardware testing
	2 nd	Maskable and non-maskable		

	3 rd	Edge triggered and level triggered Interrupts, Software interrupt & Various hardware interrupts of 8085	2 nd -G2	Use of 8085 emulator for hardware testing
Week13	1 st	Restart interrupts and its use	1 st -G1	Writing and execution of ALP for 1's & 2's complement of an 8 bit number
	2 nd	Servicing interrupt extending interrupt system		
	3 rd	Data Transfer Techniques : Concept of programmed I/O operations	2 nd -G2	Writing and execution of ALP for 1's & 2's complement of an 8 bit number
Week14	1 st	sync data transfer, async data transfer (hand shaking)	1 st -G1	Writing and execution of ALP shift left & right of an 8 bit number by 1 bit
	2 nd	Interrupt driven data transfer & DMA, Serial output data & Serial input data		
	3 rd	Peripheral devices: 8255 PPI	2 nd -G2	Writing and execution of ALP shift left & right of an 8 bit number by 1 bit
Week15	1 st	8253 PIT, 8257/8237 DMA controller	1 st -G1	Addition and subtraction of two 16-bit numbers
	2 nd	Architecture of 8086 microprocessor: Block diagram		
	3 rd	Minimum and maximum mode, Pin and signals	2 nd -G2	Addition and subtraction of two 16-bit numbers