

Lesson Plan

Name of the Faculty member: Krishan Singh

Discipline: Computer Engg.

Semester: 4th

Subject: Microprocessor & Peripheral Devices

Lesson Plan duration: 6 March 2023 to 23 June 2023

Work load (Lecture /Practical) per week (in hours): Lectures—04 Practical-03

Week	Theory		Practical	
	Lect. day	Topic Covered (Including Assessment and Sessional)	Pract. Day	Topic Covered (Including Viva-Voce)
1 st	1.	Introduction to Microprocessor, Evolution of Microprocessor	1.	Familiarization to different keys of 8085 microprocessor kit and it's memory map (Gr-A)
	2.	Different units of a Microprocessor & Description of each Unit	2.	Familiarization of different keys of 8085 microprocessor kit and it's memory map (Gr-B)
	3.	Organization of a Microcomputer System, Applications of Microprocessor		
2 nd	4.	Introduction to Intel 8085 microprocessor, features, and its Architecture	3.	Steps to Enter, Modify data/ program and to execute a programme on 8085 kit (Gr-A)
	5.	Functional Block Diagram of 8085 and Explanation of each Unit	4.	Steps to Enter, Modify data/ program and to execute a Programme on 8085 kit (Gr-B)
	6.	System Buses: Address Bus, Data Bus, Control Bus		
3 rd	7.	Pin Diagram of 8085 & Description of each Pin	5.	Writing and Execution of ALP for addition and Subtraction of two 8-bits numbers (Gr-A)
	8.	Demultiplexing of Address/Data Bus, Generation of Read/Write Control signals	6.	Writing and Execution of ALP for addition and Subtraction of two 8-bits numbers (Gr-B)
	9.	Steps to execute a stored programme		
4 th	10.	Instruction Cycle, Machine cycle, and T-state, Fetch and Execute Operation	7.	Writing and Execution of ALP for addition and Subtraction of two 8-bits

				numbers (Gr-A)
	11.	Timing Diagram for Opcode Fetch, Memory Read and Memory Write M/C cycles	8.	Writing and Execution of ALP for addition and Subtraction of two 8-bits numbers (Gr-B)
	12.	Timing Diagram for I/O Read and I/O Write M/C cycles		
5 th	13.	1st Sessional Test	9.	Viva- Voce I (Gr-A)
	14.	Introduction to programming w.r.t 8085, Assembly Language and Machine language	10.	Viva- Voce I (Gr-B)
	15.	Instruction, Instruction Formats, Addressing Modes		
6 th	16.	Intel 8085 Instructions: Data Transfer group	11.	Writing and Execution of ALP for Finding the largest or smallest among many 8-bits numbers (Gr-A)
	17.	Arithmetic and Logic Group of Instructions	12.	Writing and Execution of ALP for Finding the largest or smallest among many 8-bits numbers (Gr-B)
	18.	Branching & M/C Control group of Instructions		
7 th	19.	Programming Techniques: Looping, Counting, and Indexing	13.	Few Value Added Programming Examples (Gr-A)
	20.	Counters & Time Delays	14.	Few Value Added Programming Examples (Gr-B)
	21.	Stack & Subroutine		
8 th	22.	Introduction to Interfacing: Logic Devices for Interfacing	15.	Writing and Execution of ALP for arranging 10 numbers in ascending/descending order (Gr-A)
	23.	Memory Interfacing: Address Decoding and Interfacing Circuit	16.	Writing and Execution of ALP for arranging 10 numbers in ascending/descending order (Gr-B)
	24.	Memory map of 8085 Microprocessor, Memory mapped I/O, and I/O Mapped I/O Schemes		
9 th	25.	I/O Interfacing, Interfacing I/O Devices using Decoders	17.	Viva-Voce II (Gr-A)
	26.	2nd Sessional Test	18.	Viva-Voce II (Gr-B)
	27.	Interrupts: Definition, Sequence of Interrupt Operation, Interrupt Classification		
10 th	28.	8085 H/W Interrupts: TRAP, RST 7.5, RST 6.5, RST 5.5, INTR	19.	Writing and Execution of ALP for 0 TO 9 BCD Counters (Gr-A)
	29.	S/W Interrupts, Instructions for handling Interrupts: RIM, SIM, EI, DI	20.	Writing and Execution of ALP for 0 TO 9 BCD Counters (Gr-B)
	30.	Data Transfer Techniques: Programmed, DMA, Synchronous and Asynchronous Data Transfer		

		schemes		
11 th	31.	Interrupt driven data Transfer scheme	21.	Interfacing Exercise on 8255 like LED Display Controller (Gr-A)
	32.	Direct Memory Access(DMA) Scheme of data transfer and it's types	22.	Interfacing Exercise on 8255 like LED Display Controller (Gr-B)
	33.	Programmable Peripheral Devices: 8255 PPI		
12 th	34.	8253 PIT	23.	Interfacing Exercise on 8253 Programmable Interval Timer (Gr-A)
	35.	8257/8237 DMA Controller	24.	Interfacing Exercise on 8253 Programmable Interval Timer (Gr-B)
	36.	8279 Programmable Keyboard display Interface		
13 th	37.	8251 Communication Interface Adapter	25.	Viva Voce III(Gr-A)
	38.	3rd Sessional Test	26.	Viva Voce III(Gr-B)
	39.	Revision		