

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN Session-2023-2024

Discipline: Computer Sc. & Engg. Engg. Semester: 4th

Subject: MM C

Name of the Teaching Faculty: Subhasmita Bha'

Subject: MPMC No. of Days/per week class allotted: 4

Semester From Date: 16-01-2024 To Date: 26-04-2024 No. of Weeks: 15

Week	Class Day	Theory / Practical Topics
1	1	Introduction to Microprocessor & Microcontroller & distinguish between them
	2.	Concept of Address bus, data bus
	3.	Control bus & System bus
	4.	General Bus Structure block diagram
2.	1.	Basic Architecture of 8085 (8 bit) MP
	2.	Basic Architecture of 8085 (8 bit) MP
	3.	Pin diagram of 8085 MP
	4.	Pin diagram of 8085 MP
3.	1.	Register Organization of 8085 MP
	2.	Distinguish between SPR & GPR. Timing & Control Module
	3.	Stack, Stack pointer & stack top

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Week	Class Day	Theory / Practical Topics
	4.	Interrupts - 8085 Interrupts
4.	4.	Masking of Interrupt (SIM, RIM)
	2.	Memory & I/O Addressing
	3.	Define opcode, Operand, T-State, Fetch cycle
	4.	Instruction cycle & discuss the concept of Timing diagram
5.	1.	Draw timing diagram of memory read, memory write, Timing diagram for I/O read, I/O write memory cycle.
	2.	Timing diagram for (MOV, MVI, LDA instruction)
	3.	Concept of interfacing
	4.	Define mapping & Data transfer Mechanism -
6.	1	Memory & I/O Mapping
	2.	Interfacing EPROM & RAM memories

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	3.	Concept of Address decoding & I/O devices.
	4.	PPI: 8255 (Programmable Peripheral Interface)
7.	1.	ADC & DAC with Interfacing
	2.	Addressing data & Differentiate between one byte, 2 byte & 3. byte with example
	3.	Addressing mode with example
	4.	Instruction set of 8085 (data transfer) arithmetic
8	1.	Instruction set of logical, Branching, Stack & I/O, Machine control.
	2.	Simple Assembly language programming of 8085
	3.	Program of Simple Addition & Subtraction, 1's complement & 2's complement.
	4.	Masking of bits, Counter & Time delay
9.	1.	Program of looping, counting & Indexing (cell/word)

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	2.	Stack & Subroutine Programme.
	3.	code conversion, BCD Arithmetic & 16 bit data operation, Block transfer, Compare between two numbers, Largest & Smallest number in a array.
	4.	Interfacing Seven Segment Displays.
10.	1.	Generate Square Wave on all lines of 8255
	2.	Design interface a traffic Light control system using 8255
	3.	Design Interface of Stepper motor control using 8255.
	4.	Design Interface of Stepper motor control using 8255.
11.	1.	Register Organization of 8086
	2.	Flags of 8086
	3.	Internal architecture of 8086
	4.	Signal description of 8086

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Week	Class Day	Theory / Practical Topics
12.	1.	General Bus Operation & Physical Memory Organization
	2.	Minimum Mode & Timing, Maximum mode
	3.	Interrupts, ISR, NMI, Maskable Interrupts.
	4.	8086 Instruction set: Addressing Mode.
13.	1.	Simple Assembly language Programming
	2.	Distinguish between MP & MC
	3.	Memory Organization - RAM Structure, Registers
	4.	Timers, Interrupts of 8051 MC, CISC & RISC
14.	1.	Signal description of 8051 Microcontroller
	2.	Addressing of 8051 MC
	3.	Simple 8051 Assembly language Programming.
	4.	Serial Communication
15.	1.	Microcontroller Interrupts & Interfacing to 8255
	2.	Discussion
	3.	Discussion.

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