4th Sem, MP&MC

BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

SIVARAM VIHAR, GHATAKESWAR HILLS
MOHADA, BERHAMPUR (GM.)

STUDENT'S ATTENDANCE REGISTER

Time / Day	9:05 – 9:55	9:55 – 10:45	10:45 – 11:35	11:35 – 12:25	
MON			MP&MC		
TUE			MP&MC		
WED	MP&MC				
THU				MP&MC	
FRI	MP&MC				

Year/ Session	13-02-2023 – 23-05-23
Semester & Branch	4th Semester - [E&TC]
Subject with Code	MP & MC . (TH-3)
Name of the Faculty Member	Purna Ch. Nahak

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			UNIT-1 :- Microprocessor (Architecture and Programming 8085-8-bit)
	2nd	13/02/23	1.1. Introduction to microprocessor and microcomputer & distinguish between them.
		14/02/23	1.2. Concept of address bus, data bus, control bus & system bus.
FEB.		15/02/23	1.3. General Bus structure of 8085 (8-bit) microprocessor.
		16/02/23	1.4. Basic Architecture of 8085 (8-bit) microprocessor.
	3rd	17/02/23	
		20/02/23	1.5. Signal description (pin diagram) of 8085 microprocessor.
		21/02/23	1.6. Register organisations, distinguish between SPR & GPR, Timing & control.

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Month	Week	Class Day	Theory/Practical Topic
			module.
	4th	22/02/23	1.7. stack, stack pointer & stack top.
		23/02/23	1.8. Interrupts :- 8085 interrupts, masking of interrupt (SIM, RIM).
FEB.			UNIT-2 :- Instruction set & Assembly Languages Programming.
		24/02/23	2.1. Addressing data & differenciate between one-byte, two-byte and three-byte instructions with examples.

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Month	Week	Class Day	Theory/Practical Topic
MARCH.	4th	27/02/23	2.2. Addressing modes in instructions with suitable examples.
		28/02/23	2.3. Instruction set of 8085 (Data transfer, Arithmetic, Logical, branching, stack & I/O, machine control)
	3rd	17/03/23	2.4. Simple Assembly language Programming of 8085:
		18/03/23	2.4.1. Simple addition & subtraction.
		20/03/23	2.4.2. Logic operations (AND, OR, complement 1's & 2's) & masking of bits.
		21/03/23	2.4.3. Counters and time delay (single Register, Register pair, more than two Registers)

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Month	Week	Class Day	Theory/Practical Topic
MARCH	4th	22/03/23	2.4.4. Looping, counting and indexing (call/JMP etc)
		23/03/23	2.4.5. Stack & subroutine programmes.
		24/03/23	2.4.6. Code conversion, BCD arithmetic & 16 bit data operation, Block transfer.
		25/03/23	
		27/03/23	2.4.7. Compare between two numbers.
		28/03/23	2.4.8. Array handling (Largest number & smallest number in the array)
		29/03/23	2.5. Memory & I/O addressing

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Month	Week	Class Day	Theory/Practical Topic
			UNIT-3 :- Timing Diagrams
APRIL	1st	03/04/23	3.1. Define opcode, operand, T-state, fetch cycle, machine cycle, instruction cycle & discuss the concept of timing diagram.
		04/04/23	3.2. Draw timing diagram for memory read, memory write, I/O read, I/O write machine cycle.
		07/04/23	3.3. Draw a neat sketch for the timing for 8085 instruction (MOV, MVI, LDA instruction)

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Month	Week	Class Day	Theory/Practical Topic
			UNIT-4 :- Microprocessor Based system Development Aids
		06/04/23	4.1. Concept of Interfacing
		08/04/23	4.2. Define mapping and data transfer mechanisms- memory mapping & I/O mapping.
APRIL	2nd	10/04/23	4.3. concept of memory interfacing :- Interfacing EPROM & RAM memories.
		11/04/23	
		12/04/23	4.4. Concept of address, decoding for I/O devices.
		13/04/23	4.5. Programmable peripheral Interface : 8255.

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Month	Week	Class Day	Theory/Practical Topic
APRIL	3rd	15/04/23	4.6. ADC & DAC with interfacing.
		17/04/23	4.7. Interfacing seven segment displays.
		18/04/23	4.8. Generate square waves on all lines of 8255.
		19/04/23	4.9. Design interface a traffic light control system using 8255.
		20/04/23	4.10. Design interface for stepper motor control using 8255..
		21/04/23	4.11. Basic concept of other
		24/04/23	Interfacing DMA controller, USART.

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Month	Week	Class Day	Theory/Practical Topic
			UNIT-5 :- Microprocessor (Architecture & Programming 8086 - 16-bit)
APRIL	4th	25/04/23	5.1. Register Organization of 8086.
		26/04/23	5.2. Internal Architecture of 8086
		27/04/23	5.3. Signal description of 8086.
		28/04/23	5.4. General Bus operation & Physical memory organisation.
MAY	1st	01/05/23	5.5. Minimum mode & timings
		02/05/23	5.6. Maximum mode & timings.
		03/05/23	5.7. Interrupts & interrupt service routines, interrupt cycle, non-maskable
		04/05/23	

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Month	Week	Class Day	Theory/Practical Topic
MAY	2nd	06/05/23	. interrupt, maskable interrupt 5.8. 8086 instruction set and Programming : Addressing modes, instruction set, assembler directives and operators.
		08/05/23 – 09/05/23	5.9. Simple assembly language Programming using 8086 instructions.

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Month	Week	Class Day	Theory/Practical Topic
			UNIT-6 :- Microcontroller (Architecture & Programming 8-bit)
MAY	2nd	10/05/23	6.1. Distinguish between microprocessor & microcontroller.
		11/05/23	6.2. 8-bit & 16-bit microcontroller.
			6.3. CISC & RISC processor.
		12/05/23	6.4. Architecture of 8051 microcontroller.
MAY		13/05/23	6.5. Signal description of 8051 microcontroller.
		15/05/23	6.6. Memory organisation- RAM structure, SFR.

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Month	Week	Class Day	Theory/Practical Topic
MAY	3rd.	16/05/23	6.7. Registers, timers, interrupts of 8051 microcontrollers.
		17/05/23	6.8. Addressing modes of 8051.
		18/05/23 - 20/05/23	6.9. Simple 8051 assembly language programming of Arithmetic & logic instructions, JUMP, LOOP, CALL instructions, I/O port programming.
	4th	22/05/23	6.10. Interrupts, timer & counters. 6.11. Serial communication
		23/05/23	6.12. Microcontroller interrupts and interfacing to 8255.

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