

Lesson Plan

Discipline: ETC		Semester-4th Summer-2024	Name of the Teaching Faculty: Smt.PRIYANKA DHAL(GUEST FACULTY ETC Engg) AND MISS PAYAL BINDIYA PARIDA(GUEST FACULTY IN ETC)
Sl. No.	Subject-Th.3. (MICROPROCESSOR&MI CROCONTROLLER)2024 SUMMER	No. Of Days/Week class allotted:05	Semester From date: 16.01.2024To date: 26.04.2024(No of weeks: 15)
Weeks/Months	Class Day	Topic	
1	3rd week 16 jan To 20 jan	1st	1.1 Introduction to Microprocessor and Microcomputer & distinguish between them.
		2nd	1.2 Concept of Address bus, Data bus, Control bus & System Bus diode.
		3rd	1.2 Concept of Address bus, Data bus, Control bus & System Bus diode.
		4th	1.3 General Bus structure Block diagram
		5th	1.4 Basic Architecture of 8085 (8 bit) Microprocessor
2	4th week 22 jan To 27 jan	1st	1.5.1.4 Basic Architecture of 8085 (8 bit) Microprocessor.
		2nd	1.5 Signal Description (Pin diagram) of 8085 Microprocessor
		3rd	1.5 Signal Description (Pin diagram) of 8085 Microprocessor
		4th	1.6 Register Organizations, Distinguish between SPR & GPR, Timing & Control Module
3	5th week 29 jan To 1st week 03 feb	5th	1.6 Register Organizations, Distinguish between SPR & GPR, Timing & Control Module
		1st	1.7 Stack, Stack pointer & Stack top.
		2nd	1.7 Stack, Stack pointer & Stack top.
		3rd	1.8 Interrupts:-8085 Interrupts, Masking of Interrupt(SIM,RIM)
4	2nd week 05 feb To 10 feb	3rd	1.8 Interrupts:-8085 Interrupts, Masking of Interrupt(SIM,RIM)
		4th	Unit-2: Instruction Set and Assembly Language Programming 2.1 Addressing data & Differentiate between one-byte, two-byte & three-byte instructions with examples.
		1st	Unit-2: Instruction Set and Assembly Language Programming 2.1 Addressing data & Differentiate between one-byte, two-byte & three-byte instructions with examples.
		2nd	2.2 Addressing modes in instructions with suitable examples. 2.3 Instruction Set of 8085(Data Transfer, Arithmetic, Logical, Branching, Stack& I/O , Machine Control)
		3rd	2.2 Addressing modes in instructions with suitable examples. 2.3 Instruction Set of 8085(Data Transfer, Arithmetic, Logical, Branching, Stack& I/O , Machine Control)
5	3rd week 12 feb To 17 feb	4th	2.2 Addressing modes in instructions with suitable examples. 2.3 Instruction Set of 8085(Data Transfer, Arithmetic, Logical, Branching, Stack& I/O , Machine Control)n
		5th	2.4 Simple Assembly Language Programming of 8085 2.4.1 Simple Addition & Subtraction
		1st	2.4 Simple Assembly Language Programming of 8085 2.4.1 Simple Addition & Subtraction
		2nd	2.4.2 Logic Operations (AND, OR, Complement 1's & 2's) & Masking of bits
		3rd	2.4.2 Logic Operations (AND, OR, Complement 1's & 2's) & Masking of bits
		4th	2.4.3 Counters & Time delay (Single Register, Register Pair, More than Two Register).
		4th	2.4.4 Looping, Counting & Indexing (Call/JMP etc).

6	4th week 19 feb To 24 feb	1st	2.4.4 Looping, Counting & Indexing (Call/JMP etc).
		2nd	2.4.5 Stack & Subroutine programmes.
		3rd	2.4.5 Stack & Subroutine programmes.
		4th	2.4.6 Code conversion, BCD Arithmetic & 16 Bit data Operation, Block Transfer
		4th	2.4.6 Code conversion, BCD Arithmetic & 16 Bit data Operation, Block Transfer
7	2nd week 04 march To 09 march	1st	2.4.7 Compare between two numbers
		2nd	2.4.8 Array Handling (Largest number & smallest number in the array)
		3rd	2.4.8 Array Handling (Largest number & smallest number in the array)
		4th	2.5 Memory & I/O Addressing,
		4th	2.5 Memory & I/O Addressing,
8	3rd week 11 march To 16 march	1st	Unit-3: TIMING DIAGRAMS. 3.1 Define opcode, operand, T-State, Fetch cycle, Machine Cycle, Instruction cycle & discuss the concept of timing diagram
		2nd	Unit-3: TIMING DIAGRAMS. 3.1 Define opcode, operand, T-State, Fetch cycle, Machine Cycle, Instruction cycle & discuss the concept of timing diagram
		3rd	Unit-3: TIMING DIAGRAMS. 3.1 Define opcode, operand, T-State, Fetch cycle, Machine Cycle, Instruction cycle & discuss the concept of timing diagram
		4th	3.2 Draw timing diagram for memory read, memory write, I/O read, I/O write machine cycle.
		5th	3.2 Draw timing diagram for memory read, memory write, I/O read, I/O write machine cycle.
9	4th week 18 march To 23 march	1st	3.2 Draw timing diagram for memory read, memory write, I/O read, I/O write machine cycle.
		2nd	Draw a neat sketch for the timing diagram for 8085 instruction (MOV, MVI, LDA instruction)
		3rd	Draw a neat sketch for the timing diagram for 8085 instruction (MOV, MVI, LDA instruction)
		4th	Draw a neat sketch for the timing diagram for 8085 instruction (MOV, MVI, LDA instruction)
		5th	Unit-4 Microprocessor Based System Development Aids 4.1 Concept of interfacing
10	5th week 25 march To 30 march	1st	Unit-4 Microprocessor Based System Development Aids 4.1 Concept of interfacing
		2nd	4.2 Define Mapping & Data transfer mechanisms - Memory mapping & I/O Mapping
		3rd	4.3 Concept of Memory Interfacing:- Interfacing EPROM & RAM Memory.
		4th	4.3 Concept of Memory Interfacing:- Interfacing EPROM & RAM Memory.
		5th	4.5 Programmable Peripheral Interface: 8255
11	1st week 01 april To 06 april	1st	4.6 ADC & DAC with Interfacing
		2nd	4.7 Interfacing Seven Segment Displays
		3rd	4.7 Interfacing Seven Segment Displays
		4th	4.8 Generate square waves on all lines of 8255
		5th	4.9 Design Interface a traffic light control system using 8255.

12	1st week 08 april To 13 april	1st	4.11 Basic concept of other Interfacing DMA controller,USART
		2nd	4.10 Design interface for stepper motor control using 8255..
		3rd	4.10 Design interface for stepper motor control using 8255..
		4th	Unit-5 Microprocessor (Architecture and Programming-8086-16 bit) 5.1 Register Organisation of 8086 5.2 Internal architecture of 8086
		5th	5.7 Interrupts and Interrupt Service Routines, Interrupt Cycle, Non-Maskable Interrupt, Maskable Interrupt
13	2nd week 15 april To 20 april	1st	5.7 Interrupts and Interrupt Service Routines, Interrupt Cycle, Non-Maskable Interrupt, Maskable Interrupt 5.8 8086 Instruction Set & Programming: Addressing Modes, Instruction Set, Assembler Directives and Operators,s.
		2nd	5.9 Simple Assembly language programming using 8086 instructions
		3rd	6.2 8 bit & 16 bit microcontroller 6.3 CISC & RISC processor
		4th	6.1 Distinguish between Microprocessor & Microcontroller
		5th	6.2 8 bit & 16 bit microcontroller 6.3 CISC & RISC processor
14	3rd week 22 april To 26 april	1st	6.4 Architecture of 8051 Microcontroller.
		2nd	6.5 Signal Description of 8051 Microcontrollers 6.5 Signal Description of 8051 Microcontrollers
		3th	6.7 Registers, timers, interrupts of 8051 Microcontrollers 6.8 Addressing Modes of 8051
		4th	6.9 Simple 8051 Assembly Language Programming Arithmetic & Logic Instructions , JUMP, LOOP, CALL Instructions, I/O Port Programming
		5th	6.10 Interrupts, Timer & Counters Communication 6.12 Microcontroller Interrupts and Interfacing to 8255

Signature of the Faculty