LESSON PLAN (SUMMER-2022)

Discipline: IT	Semester: 4th	Name of the Teaching Faculty: AMIT KUMAR NAYAK	
Subject: Microprocessor & Mocrocontroller	No of Days /per week class allotted: 5	Semester From date: 10.03.2022 To 10.06.2022 No of Weeks:15	
Week	**Class Day**	**Theory / Practical Topics**	**Date**
1st	1st	**Unit-1:Microprocessor (Architecture and Programming-8085-8-bit) (15)** 1.1 Introduction to Microprocessor and Microcomputer & distinguish between them.	10.03.2022
	2nd	1.2 Concept of Address bus, Data bus, Control bus & System Bus	11.03.2022
	3rd	1.3 General Bus structure Block diagram.	14.03.2022
	4th	1.4 Basic Architecture of 8085 (8 bit) Microprocessor	15.03.2022
	5th	Cont…	16.03.2022
2nd	1st	Cont…	17.03.2022
	2nd	1.5 Signal Description (Pin diagram) of 8085 Microprocessor	21.03.2022
	3rd	Cont…	22.03.2022
	4th	Cont…	23.03.2022
	5th	1.6 Register Organizations,Distinguish between SPR & GPR, Timing & Control Module,	24.03.2022
3rd	1st	Cont…	25.03.2022
	2nd	1.7 Stack, Stack pointer &Stack top.	28.03.2022
	3rd	Cont…	29.03.2022
	4th	1.8 Interrupts:-8085 Interrupts, Masking of Interrupt(SIM,RIM)	30.03.2022
	5th	Cont…	31.03.2022
4th	1st	**Unit-2: Instruction Set and Assembly Language Programming (15)** 2.1 Addressing data & Differentiate between one-byte, two-byte &three-byte instructions with examples.	04.04.2022
	2nd	2.2 Addressing modes in instructions with suitable examples.	05.04.2022
	3rd	Cont…	06.04.2022
	4th	2.3 Instruction Set of 8085(Data Transfer, Arithmetic, Logical, Branching, Stack& I/O , Machine Control)	07.04.2022
	5th	cont…	08.04.2022
5th	1st	2.4 Simple Assembly Language Programming of 8085 2.4.1 Simple Addition & Subtraction	11.04.2022
	2nd	Cont…	12.04.2022
	3rd	2.4.2 Logic Operations (AND, OR, Complement 1's & 2's) & Masking of bits	13.04.2022
	4th	2.4.3 Counters & Time delay (Single Register, Register Pair, More than Two Register)	18.04.2022
	5th	2.4.4 Looping, Counting & Indexing (Call/JMP etc).	19.04.2022
6th	1st	2.4.5 Stack & Subroutine programes.	20.04.2022
	2nd	2.4.6 Code conversion, BCD Arithmetic & 16 Bit data Operation, Block Transfer.	21.04.2022
	3rd	2.4.7 Compare between two numbers	22.04.2022
	4th	2.4.8 Array Handling (Largest number & smallest number in the array)	25.04.2022
	5th	2.5 Memory & I/O Addressing,	26.04.2022
7th	1st	**Unit-3: TIMING DIAGRAMS. (8)** 3.1 Define opcode, operand, T-State, Fetch cycle, Machine Cycle, Instruction cycle & discuss the concept of timing diagram.	27.04.2022
	2nd	Cont…	28.04.2022
	3rd	3.2 Draw timing diagram for memory read, memory write, I/O read, I/O write machine cycle.	29.04.2022
	4th	**Cont…**	02.05.2022
	5th	**Cont…**	04.05.2022

8th	1st	3.3 Draw a neat sketch for the timing diagram for 8085 instruction (MOV, MVI, LDA instruction).	05.05.2022
	2nd	Cont…	06.05.2022
	3rd	Cont…	09.05.2022
	4th	**Unit-4 Microprocessor Based System Development Aids (10)** 4.1 Concept of interfacing	10.05.2022
	5th	4.2 Define Mapping &Data transfer mechanisms - Memory mapping & I/O Mapping	11.05.2022
9th	1st	4.3 Concept of Memory Interfacing:- Interfacing EPROM & RAM Memories	12.05.2022
	2nd	4.4 Concept of Address decoding for I/O devices	13.05.2022
	3rd	4.5 Programmable Peripheral Interface: 8255	17.05.2022
	4th	Cont…	18.05.2022
	5th	4.6 ADC & DAC with Interfacing.	19.05.2022
10th	1st	Cont…	20.05.2022
	2nd	4.7 Interfacing Seven Segment Displays	23.05.2022
	3rd	4.8 Generate square waves on all lines of 8255	24.05.2022
	4th	4.9 Design Interface a traffic light control system using 8255.	25.05.2022
	5th	Cont…	26.05.2022
11th	1st	4.10 Design interface for stepper motor control using 8255.	27.05.2022
	2nd	4.11 Basic concept of other Interfacing DMA controller,USART	31.05.2022
	3rd	**Unit-5 Microprocessor (Architecture and Programming-8086-16 bit) (12)** 5.1 Register Organisation of 8086	01.06.2022
	4th	5.2 Internal architecture of 8086	02.06.2022
	5th	Cont…	03.06.2022
12th	1st	5.3 Signal Descriptionof 8086	06.06.2022
	2nd	Cont…	07.06.2022
	3rd	5.4 General Bus Operation& Physical Memory Organisation	08.06.2022
	4th	5.5 MinimumMode&Timings, 5.6 Maximum Mode&Timings,	09.06.2022
	5th	5.7 Interrupts and Interrupt Service Routines, Interrupt Cycle, Non-Maskable Interrupt, Maskable Interrupt	10.06.2022
13th	1st	5.8 8086 Instruction Set & Programming: Addressing Modes, Instruction Set, Assembler Directives and Operators,	Extra Class
	2nd	5.9 Simple Assembly language programmingusing 8086 instructions.	Extra Class
	3rd	**Unit-6 Microcontroller (Architecture and Programming-8 bit) (15)** 6.1 Distinguish between Microprocessor & Microcontroller	Extra Class
	4th	6.2 8 bit & 16 bit microcontroller 6.3 CISC & RISC processor	Extra Class
	5th	6.4 Architectureof8051Microcontroller	Extra Class
14th	1st	6.5 Signal Descriptionof8051Microcontrollers	Extra Class
	2nd	6.6 Memory Organisation-RAM structure, SFR	Extra Class
	3rd	6.7 Registers,timers,interruptsof8051Microcontrollers	Extra Class
	4th	6.8 Addressing Modes of 8051	Extra Class
	5th	6.9 Simple 8051 Assembly Language ProgrammingArithmetic & Logic Instructions , JUMP, LOOP, CALL Instructions, I/O Port Programming	Extra Class
15th	1st	Cont…	Extra Class
	2nd	6.10 Interrupts, Timer & Counters	Extra Class
	3rd	6.11 Serial Communication	Extra Class
	4th	6.12 Microcontroller Interrupts and Interfacing to 8255	Extra Class
	5th	Cont…	Extra Class

Signature of the Faculty