Discipline :- ETC	Semester:- 4th	Name of the Teaching Faculty: - Sasmita Das		
Subject:- Microprocessor & Microcontroller (Th. 3)	No of Days/per Week Class Allotted :- 05	Semester From:- __14.02.2023__ To:- __23.05.2023__		
Week	Class Day	Theory		
1st	1st	Introduction to Microprocessor and Microcomputer & distinguish between them.		
	2nd	Concept of Address bus, Data bus, Control bus & System Bus		
	3rd	Concept of Address bus, Data bus, Control bus & System Bus		
	4th	General Bus structure Block diagram		
	5th	Basic Architecture of 8085 (8 bit) Microprocessor		
2nd	1st	Basic Architecture of 8085 (8 bit) Microprocessor		
	2nd	Basic Architecture of 8085 (8 bit) Microprocessor		
	3rd	Basic Architecture of 8085 (8 bit) Microprocessor		
	4th	Signal Description (Pin diagram) of 8085 Microprocessor		
	5th	Signal Description (Pin diagram) of 8085 Microprocessor		
3rd	1st	Signal Description (Pin diagram) of 8085 Microprocessor		
	2nd	Register Organizations, Distinguish between SPR & GPR, Timing & Control Module		
	3rd	Register Organizations, Distinguish between SPR & GPR, Timing & Control Module		
	4th	Stack, Stack pointer & Stack top		
	5th	Interrupts:-8085 Interrupts, Masking of Interrupt(SIM,RIM)		

4th	1st	Addressing data & Differentiate between one-byte, two-byte &three-byte Instructions with examples..	
	2nd	Addressing modes in instructions with suitable examples	
	3rd	Instruction Set of 8085(Data Transfer, Arithmetic, Logical, Branching, Stack& I/O , Machine Control)	
	4th	Instruction Set of 8085(Data Transfer, Arithmetic, Logical, Branching, Stack& I/O , Machine Control)	
	5th	Instruction Set of 8085(Data Transfer, Arithmetic, Logical, Branching, Stack& I/O , Machine Control)	
5th	1st	Simple Assembly Language Programming of 8085	
	2nd	Simple Addition & Subtraction	
	3rd	Logic Operations (AND, OR, Complement 1's & 2's) & Masking of bits	
	4th	Counters & Time delay (Single Register, Register Pair, More than Two Register)	
	5th	Looping, Counting & Indexing (Call/JMP etc).	
6th	1st	Code conversion, BCD Arithmetic & 16 Bit data Operation,	
	2nd	Block Transfer	
	3rd	Compare between two numbers	
	4th	Array Handling (Largest number & smallest number in the array)	
	5th	Memory & I/O Addressing	
7th	1st	Define opcode, operand, T-State, Fetch cycle,..	
	2nd	Machine Cycle, Instruction cycle & discuss the concept of timing diagram.	
	3rd	Draw timing diagram for memory read machine cycle	
	4th	Draw timing diagram for memory write machine cycle	
	5th	Draw timing diagram for I/O read machine cycle	
	1st	Draw a neat sketch for the timing diagram for 8085 instruction (MOV instruction)	

8th	2nd		Draw a neat sketch for the timing diagram for 8085 instruction (MVI, instruction)
	3rd		Draw a neat sketch for the timing diagram for 8085 instruction (LDA instruction)
	4th		Concept of interfacing
	5th		Define Mapping &Data transfer mechanisms - Memory mapping & I/O Mapping
9th	1st		Concept of Memory Interfacing:- Interfacing EPROM & RAM Memories
	2nd		Concept of Address decoding for I/O devices
	3rd		Programmable Peripheral Interface: 8255
	4th		ADC & DAC with Interfacing.
	5th		Interfacing Seven Segment Displays
10th	1st		Generate square waves on all lines of 8255
	2nd		Design Interface a traffic light control system using 8255 , Design interface for stepper motor control using 8255
	3rd		Basic concept of other Interfacing DMA controller USART
	4th		Register Organisation of 8086
	5th		Internal architecture of 8086
11th	1st		Internal architecture of 8086
	2nd		Signal Description of 8086
	3rd		Signal Description of 8086
	4th		General Bus Operation& Physical Memory Organisation
	5th		Minimum Mode & Timings

12th	1st	Maximum Mode &Timings	
	2nd	Interrupts and Interrupt Service Routines, Interrupt Cycle, Non-Maskable Interrupt, Maskable Interrupt	
	3rd	Instruction Set & Programming: Addressing Modes	
	4th	Instruction Set, Assembler Directives and Operators	
	5th	Simple Assembly language programming using 8086 instructions.	
13th	1st	Distinguish between Microprocessor & Microcontroller	
	2nd	8 bit & 16 bit microcontroller	
	3rd	CISC & RISC processor	
	4th	Architectureof8051 Microcontroller	
	5th	Signal Description of 8051Microcontrollers	
14th	1st	Signal Description of 8051Microcontrollers	
	2nd	Memory Organisation-RAM structure, SFR	
	3rd	Registers ,timers ,interrupts of8051Microcontrollers	
	4th	Addressing Modes of 8051	
	5th	Simple 8051 Assembly Language Programming Arithmetic & Logic Instructions ,	
15th	1st	JUMP, LOOP, CALL Instructions, I/O Port Programming	
	2nd	JUMP, LOOP, CALL Instructions, I/O Port Programming	
	3rd	Interrupts, Timer & Counters	
	4th	Serial Communication	
	5th	Microcontroller Interrupts and Interfacing to 8255	

S.Das
13/02/23
Teaching Faculty

HOD ,ETC 13/02/2023