Lesson Plan

Name of the Faculty : Er. Monika Sharma (Theory/Practical)

Discipline : Electronics and Communication Engineering

Semester : 4th

Subject: Microprocessors and Microcontroller (EC-210A)

Microprocessors and Microcontroller Lab (EC-212LA)

Lesson Plan Duration : 15 weeks (from Jan, 2021 to Apr, 2021)

Work Load (Lecture / Practical) per week (in hours): Lectures-03, Practical-03

Week	Theory		Practical	
	Lecture Day	**Topic (including assignment / test)**	**Practical Day**	**Topic**
1st	1st	Evolution of Microprocessor	1st	Add / Sub two 16 bit numbers.
	2nd	Introduction to 8-bit Microprocessor 8085 architecture		
	3rd	Pin Details 8085 Microprocessor		
2nd	4th	8086 Architecture description of data registers, address registers	2nd	Multiply two 16 bit unsigned/ signed numbers.
	5th	Pointer and index registers		
	6th	PSW, Queue BIU and EU		
3rd	7th	8086 Pin diagram descriptions	3rd	Divide two unsigned/ signed numbers (32/16 , 16/8, 16/16, 8/8)
	8th	Generating 8086 CLK and reset signals using 8284		
	9th	WAIT state generation.		
4th	10th	Microprocessor BUS types and buffering techniques	4th	Find smallest/ largest number from array of n numbers.
	11th	8086 minimum mode and maximum mode CPU module		
	12th	Assignment-1/ Class Test		
5th	13th	8086 CPU Read/Write timing diagrams in minimum mode and maximum mode.	5th	First Internal Viva
	14th	8051 Architecture		

	15th	On-chip memory organization – general purpose registers		
6th	16th	SFR registers, Internal RAM and ROM	6th	Arrange numbers in array in ascending/ descending order.
	17th	Oscillator and Clock circuits		
	18th	Pin Diagram of 8051		
7th	19th	I/O Pins, Port, Connecting external memory	7th	Convert Hex to Decimal, Decimal to Hex.
	20th	Counters and Timers, Purpose of TCON & TMOD registers		
	21st	Serial data transmission/reception and transmission modes		
8th	22nd	Purpose of SCON & PCON registers.	8th	Compare two strings using string instructions / without using string instructions.
	23rd	Assignment-2/ Class Test		
	24th	Different Types of Interrupts		
9th	25th	Purpose of Time Delays	9th	Second Internal Viva
	26th	8051 addressing modes		
	27th	8086 Instruction format		
10th	28th	Addressing modes,	10th	Display string in reverse order, string length, Concatenation of two strings.
	29th	Data transfer instructions		
	30th	String instructions, logical instructions		
11th	31st	Arithmetic instructions, transfer of control instructions	11th	To find 1‘s and 2‘s complement of a number.
	32nd	Process control instructions.		
	33rd	8051 Data transfer instructions		
12th	34th	Arithmetic and logical instructions	12th	To find 1‘s and 2‘s complement of a number.
	35th	Jump and Call instructions I/O port		
	36th	Timer and Counter programming		
13th	37th	Serial port and Interrupt programming	13th	To find Factorial of a number.

	38th	Assembly language programs.		
	39th	Memory devices, Address decoding techniques		
14th	40th	Interfacing SRAMS, ROMS /PROMS	14th	To write an ALP using 8051 Microcontrollers to perform multi byte addition and subtraction of unsigned number .
	41st	8086 Interrupt mechanism, Interrupt types and interrupt vector table		
	42nd	Intel‘s 8255 - description and interfacing with 8086		
15th	43rd	ADCs and DACs, - types operation and interfacing with 8086. Interfacing of Matrix Keyboards	15th	Third Internal Viva
	44th	ADC, DAC, Temperature Sensor, Stepper Motor with 8051		
	45th	Assignment-4/ Class Test		

Er. Monika Sharma

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