

NAME OF THE FACULTY : RAVINDER KUMAR

DISCIPLINE : ECE

SEMESTER : 5th

SUBJECT : Microcontroller

LESSON PLAN DURATION : - 15 weeks (from September to December 2020)

WORK LOAD (LECTURE/PRACTICAL) PER WEEK (IN HOURS):- LECTURE-04, PRACTIACL-03 PER GROUP

WEEK S.N.	THEORY		PRACTICAL		
	Lecture / Hrs	TOPIC (Including Assignment/Test)	Practical / Hrs	Experiment	
1 st	1	Introduction to Microcontroller series (MCS)	Group-1	1	Familiarization with Micro-controller Kit and its different sections
				2	
	2	Architecture of 8051Microcontroller		3	
			3	Architecture of 8051Microcontroller	Group-2
2					
4	Pin details	3			
2 nd	5	I/O Port structure	Group-1	1	Familiarization with Assembly Language Programming (PC Based)
				2	
	6	Memory Organization		3	
			7	Memory Organization	Group-2
2					
8	Special Function Registers (SFRs)	3			
3 rd	9	Special Function Registers (SFRs)	Group-1	1	Programming to interface switches and LEDs
				2	
				3	
	10	External Memory	Group-2	1	Programming to interface switches and LEDs
11				Instruction Set, Introduction	
	12	Instruction Set of 8051			
4 th	13	Instruction Set of 8051	Group-1	1	Programming and interface of Seven Segment and LCD.
				2	
				3	
	14	Addressing Modes,	Group-2	1	Programming and interface of Seven Segment and LCD.
15				Addressing Modes,	
	16	Types of Instructions			
5 th	17	Types of Instructions	Group-1	1	Programming and interfacing of Graphical LCD
				2	
				3	
	18	Timer operation	Group-2	1	Programming and interfacing of Graphical LCD
19				Assignment-1	
	20	Sessional Test-1			

WEEK S.N.	THEORY		PRACTICAL		
	Lecture / Hrs	TOPIC (Including Assignment/Test)	Practical / Hrs		Experiment
6 th	21	Serial Port operation	Group-1	1	Programming to interface Hex 4x4 matrix Keypad
				2	
				3	
	22	Serial Port operation	Group-2	1	Programming to interface Hex 4x4 matrix Keypad
23	Interrupts	2			
24	Interrupts	3			
7 th	25	Introduction- Assembly/C programming for Micro controller	Group-1	1	Programming for A/D converter, result on LCD.
				2	
				3	
	26	Assembler directives	Group-2	1	Programming for A/D converter, result on LCD.
27	Assembler directives	2			
28	Assembler operation	3			
8 th	29	Assembler operation	Group-1	1	Programming for D/A converter, result on LCD.
				2	
				3	
	30	Compiler operations	Group-2	1	Programming for D/A converter, result on LCD.
31	Compiler operations	2			
32	Assembler operation & Compiler operations recap	3			
9 th	33	De bugger	Group-1	1	Programming for serial data transmission from PC to Kit or Vice versa.
				2	
				3	
	34	De bugger	Group-2	1	Programming for serial data transmission from PC to Kit or Vice versa.
35	Recap- Assembly/C programming for Micro controller	2			
36	Design and Interface	3			
10 th	37	Design and Interface	Group-1	1	Programming and interfacing of RELAY and Buzzer
				2	
				3	
	38	Assignment-2	Group-2	1	Programming and interfacing of RELAY and Buzzer
39	Sessional Test-2	2			
40	Keypad interface	3			
11 th	41	Keypad interface	Group-1	1	Practice and Revision
				2	
				3	
	42	Keypad interface	Group-2	1	Practice and Revision
43	7- segment interface	2			
44	7- segment interface	3			

WEEK S.N.	THEORY		PRACTICAL		
	Lecture / Hrs	TOPIC (Including Assignment/Test)	Practical / Hrs	Experiment	
12 th	45	LCD, A/D, D/A and RTC interface with programming.	Group-1	1	Practice and Revision
				2	
				3	
	46	LCD, A/D, D/A and RTC interface with programming.	Group-2	1	Practice and Revision
47	LCD, A/D, D/A and RTC interface with programming.	2			
48	LCD, A/D, D/A and RTC interface with programming.	3			
13 th	49	Recap- Design and Interface	Group-1	1	Practice and Revision
				2	
				3	
	50	Introduction of PIC Micro controllers	Group-2	1	Practice and Revision
51	Introduction of PIC Micro controllers	2			
52	Introduction of PIC Micro controllers	3			
14 th	53	Revision	Group-1	1	Practice and Revision
				2	
				3	
	54	Revision	Group-2	1	Practice and Revision
55	Revision	2			
56	Revision	3			
15 th	57	Seminar	Group-1	1	Practice and Revision
				2	
				3	
	58	Assignment- 3	Group-2	1	Practice and Revision
	59	Sessional Test- 3		2	
60	Revision	3			