LESSON PLAN

JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA

Name of the Faculty: - Rashmita Badhai	Academic Year: - 2022-23
Course No.: - TH-3	Course Name: - Microprocessor & Microcontroller
Programme: - Diploma	Branch: - IT
Year/ Sem: - 2ⁿᵈ /4ᵗʰ	Section:

SL. No.	No. of session (min)	Unit	Topic to be Covered	Teaching Method
1.	55 min	1.1	Introduction to Microprocessor & Microcomputer	chalkboard
2.	55min	1.2	Concept of Address bus, Data bus, Control bus & system bus	chalkboard
3.	55min	1.3	General Bus structure block diagram	chalkboard
4.	55min	1.4	Basic architecture of 8085 (8-bit) Microprocessor	chalkboard
5.	55min		Revision & Class test	chalkboard
6.	55min	1.5	Pin diagram of 8085 microprocessor	chalkboard
7.	55min	1.6	Register organizations , Distinguish between SPR & GPR	chalkboard
8.	55min	1.6	Register organizations , Distinguish between SPR & GPR	chalkboard
9.	55min	1.6	Timing & control module	chalkboard
10	55 min	1.8	Stack, stack pointer & stack top	chalkboard

11	55 min	1.8	Stack, stack pointer & stack top	chalkboard
12	55min	1.8	Interrupts, Masking of interrupt(SIM,RIM	chalkboard
13	55 min	2.1	Addressing data & Differentiate between 1-byte,2-byte,3-byte instruction with example	chalkboard
14	55min	2.1	Addressing data & Differentiate between 1-byte,2-byte,3-byte instruction with example	chalkboard
15	55min	2.2	Addressing modes in instructions with suitable examples	chalkboard
16	55 min	2.3	Instruction set of 8085	chalkboard
17	55 min	2.4	Simply Assembly Language Programming of 8085	chalkboard
18	55 min	2.4.1	Simple addition & subtraction	chalkboard
19	55min		Simple multiplication and division programming	chalkboard
20	55min	2.4.2	Logic operations (AND,OR ,Complement 1's & 2's) & Masking of bits	chalkboard
21	55 min	2.4.3	Counters & Time delay (single Register, Register pair, More than two register)	chalkboard
22	55 min	2.4.4	Looping, counting & indexing (call/JMP etc)	chalkboard
23	55 min	2.4.5	Stack & subroutine programs	chalkboard
24	55 min	2.4.6	Code conversion, BCD Arithmetic & 16 bit data operation, block transfer	chalkboard
25	55 min	2.4.7	Compare between two numbers and Array handling(Largest number & smallest number in the array)	chalkboard

26	55 min	2.5	Memory & I/O Addressing	chalkboard
27	55 min	2.5	Memory & I/O Addressing	chalkboard
28	55 min	3.1	Define opcode, operand, T-State, Fetch cycle, Machine cycle, Instruction Cycle	chalkboard
29	55 min	3.1	Concept of timing diagram	chalkboard
30	55 min	3.2	Draw timing diagram for memory read, memory write	chalkboard
31	55 min	3.2	timing diagram for I/O read, I/O write machine cycle	chalkboard
32	55 min	3.2	timing diagram for I/O read, I/O write machine cycle	chalkboard
33	55 min	3.3	Draw a neat sketch for the timing diagram for 8085 instruction (MOV, MVI, LDA Instruction)	chalkboard
34	55 min	4.1	Concept of interfacing	chalkboard
35	55 min	4.2	Define Mapping & Data transfer mechanisms-memory mapping & I/O mapping	chalkboard
36	55 min	4.3	Concept of memory interfacing-interfacing EPROM &RAM Memories	chalkboard
37	55 min	4.4	Concept of Address decoding for I/O devices	chalkboard
38	55 min	4.5	Programmable Peripheral Interface: 8255,ADC & DAC Interfacing	chalkboard
39	55 min	4.6	Interfacing Seven segment displays,generate square wave on lines of 8255	chalkboard
40	55 min	4.7	Design interface a traffic light control system using 8255,interface for stepper motor control using 8255	chalkboard

41	55 min	4.8	Basic concept of other interfacing DMA controller, USART	chalkboard
42	55 min	5.1	Register Organization 8086	chalkboard
43	55 min	5.2	Internal architecture of 8086	chalkboard
44	55 min	5.3	Signal description of 8086	chalkboard
45	55 min	5.4	General Bus operation & physical memory organization	chalkboard
46	55 min	5.5	Minimum mode & Timings	chalkboard
47	55 min	5.6	Maximum mode & Timings	chalkboard
48	55 min	5.7	Interrupt & interrupt service routines, Interrupt cycle	chalkboard
49	55 min	5.8	Non- Maskable interrupt, maskable interrupt,8086 Instruction Set& programming	chalkboard
50	55 min	5.9	Simple assembly language programming using 8086 instruction	chalkboard
51	55 min	5.10	Simple assembly language programming using 8086 instruction	chalkboard
52	55 min	6.1	Distinguish between microprocessor & microcontroller	chalkboard
53	55 min	6.2	16 bit microcontroller	chalkboard
54	55 min	6.3	CISC & RISC processor	chalkboard
55	55 min	6.4	Architectur of 8051 microcontroller	chalkboard
56	55 min	6.5	Signal description of 8051 microcontroller	chalkboard
57	55 min	6.6	Memory organization-RAM structure, SFR	chalkboard
58	55 min	6.7	Registers, timers, interrupts of 8051	chalkboard
59	55 min	6.8	Addressing modes of 8051	chalkboard
60	55 min	6.9	Simple 8051 assembly language programming,	chalkboard