LESSON PLAN

DEPARTMENT OF MECHATRONICS ENGINEERING, ITT, CHOUDWAR

SUBJECT: Micro-Processor & Micro Controller **Periods:** 4 per week **SEMESTER:** 5th

NAME OF FACULTY: TAPAS RANJAN SAHOO **ACADEMIC YEAR**.2022-23

Semester Start date: 15.09.2022 **No. of weeks:** 15

Week	Period	Theory / Practical Topics
1st	1st	Introduction to Microprocessors & Microcomputers Evolution of Microprocessors
	2nd	Comparison of Microprocessors of Intel, Motorola and Zilog
	3rd	Basic Memory storage element 4x8 – Bit Register, R/W Memory Model, ROM Memory model
	4th	Memory Map and Addresses Memory Classification
2nd	1st	Memory Decoding
	2nd	Pin Configuration
	3rd	Functional block diagram – registers, accumulator
	4th	ALU, timing & control unit, Flags
3rd	1st	instruction register / decoder, address / data buffer
	2nd	Timing diagram
	3rd	instruction cycle, machine cycle
	4th	Memory read / white
4th	1st	Opcode fetch examples
	2nd	Concept of **INTERRUPTS OF 8085**
	3rd	Vectored & Non-Vectored, Hardware & Software
	4th	Maskable& Non-Maskable Interrupts
5th	1st	Interrupt Priority
	2nd	Interrupt Restart Address
	3rd	Interrupt Service
	4th	Subroutines
6th	1st	8085 Addressing Modes
	2nd	8085 Instruction Set
	3rd	8085 Instruction Set
	4th	Assembly Language, Flow Chart
7th	1st	Simple Programs with 8085
	2nd	Simple Programs with 8085
	3rd	Simple Programs with 8085
	4th	Stack & Sub-Routines
8th	1st	Counters & time delays
	2nd	Basic Concepts & Interfacing I/O devices
	3rd	Programmable Peripheral Interface – 8255
	4th	Programmable Display / Keyboard Controller – 8279
9th	1st	Programmable Interrupt Controller – 8254
	2nd	Programmable Interval Timer – 8253 / 8254
	3rd	Programmable Serial Interface – 8251
	4th	Architecture with Functional Block Diagram of Intel 8086 Microprocessor
10th	1st	Pin Configuration of Intel 8086 Microprocessor
	2nd	Memory Organization
	3rd	Interrupts of 8086
	4th	Addressing Modes of 8086

11th	1st	Instruction Set of 8086
	2nd	Instruction Set of 8086
	3rd	Simple Programming (Five)
	4th	Simple Programming (Five)
12th	1st	Simple Programming (Five)
	2nd	Stack & Subroutine
	3rd	Introduction to 32/64 Bit Microprocessor
	4th	Comparison of Microprocessors (8 bit, 16 bit & Advanced)
13th	1st	**Microprocessor Application :** Data Acquisition System
	2nd	Temperature Control System
	3rd	DC Motor Control
	4th	Traffic Light Control
14th	1st	Stepper Motor Control
	2nd	EvolutionMCS-51 Family Overview, Import features, Architecture
	3rd	8051 pin functions, Architecture
	4th	Addressing modes, Instruction set
15th	1st	Instruction set
	2nd	Instruction Assembly Programming
	3rd	Instruction Assembly Programming
	4th	Timer registers, Serial communication using 8051