BHADRAK ENGINEERING SCHOOL & TECHNOLOGY (BEST), ASURALI, BHADRAK

MICRO PROCESSOR & MICRO COINTROLLER (Th- 03)

CHAPTER WISE DISTRIBUTION OF PERIODS & EXPECTED MARKS

Sl No .	Chapter	Topics	Periods as per Syllabus	Periods actually needed	Expected marks Covered Chapter wise
1	**01**	Microprocessor(Architecture and Programming-8 bit-8085)	15	13	20
2	**02**	Instruction Set and Assembly Language Programming(8 bit)	15	12	15
3	**03**	TIMING DIAGRAMS	07	06	20
4	**04**	Microprocessor Based System Development Aids	11	10	15
5	**05**	Microprocessor (Architecture and Programming- 16 bit-8086)	12	11	15
6	**06**	Microcontroller (Architecture and Programming-8bit)	15	14	15
	TOTAL		**75**	**66**	**100**

Sign of Lect. **Sign of HOD.** **Sign of AIC** **Sign of Vice Principal**

LESSON PLAN

Discipline: Computer Sc. Engineering./E&TC Engg.	**Semester:** Forth (4th)	**Name of the Faculty:** Er Biswaranjan Nayak
Subject: Microprocessor & Microcontroller	**No. of days/week class allotted:** Six (6)	**Semester from Date:** 16.02.23 **to Date:** 23.05.23 **No. of Weeks:** 15
WEEK	**CLASS DAY**	**THEORY TOPICS**
1st	1st	**Chapter-1 Microprocessor (Architecture and Programming-8 bit-8085)** Introduction to Microprocessor and Microcomputer
	2nd	Distinguish between Microprocessor and Microcomputer.
	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
	6th	Basic Architecture of 8085 (8 bit) Microprocessor
2nd	1st	Signal Description (Pin diagram) of 8085 Microprocessor
	2nd	Register Organizations, Distinguish between SPR & GPR
	3rd	Timing & Control Module,
	4th	Stack, Stack pointer & Stack top.
	5th	Interrupts:-8085 Interrupts,
	6th	Masking of Interrupt(SIM,RIM)
3rd	1st	***Possible Question Answer Discussion***
	2nd	**Chapter-2 Instruction Set and Assembly Language Programming (8 bit)** Addressing data & Differentiate between one-byte, two-byte & three-byte instructions with examples.
	3rd	Addressing modes in instructions with suitable examples.
	4th	Instruction Set of 8085-Data Transfer instruction set.
	5th	Arithmetic Instruction set, Branching instruction
	6th	Logical instruction set, Stack& I/O , Machine Control instruction

4th	1st	**Simple Assembly Language Programming of 8085-** Simple Addition of two 8 bit numbers, Subtraction of two 8 bit numbers.
	2nd	Logic Operations (AND, OR operation.) Complement:- 1's & 2's complement & Masking of bits
	3rd	Counters & Time delay (Single Register, Register Pair, More than Two Register)
	4th	Looping, Counting & Indexing (Call/JMP etc.).
	5th	Stack & Subroutines programs. Code conversion, BCD Arithmetic16 Bit, Data Operation, Block Transfer.
	6th	**Monthly Test**
5th	1st	Program to Compare between two numbers using 8085 MP.
	2nd	Array Handling (Largest number & smallest number in the array), Memory & I/O Addressing
	3rd	***Possible Question Answer Discussion***
	4th	**Chapter-3 Timing diagrams** Define opcode, operand, T-State, Fetch cycle, Machine Cycle, Instruction cycle & discuss the concept of timing diagram.
	5th	Draw timing diagram for memory read, memory write Machine cycle
	6th	Draw timing diagram for I/O read, I/O write machine cycle.
6th	1st	Draw timing diagram for I/O read, I/O write machine cycle.
	2nd	Draw a neat sketch for the timing diagram for 8085 instruction (MOV instruction).
	3rd	Draw a neat sketch for the timing diagram for MVI, LDA instruction) Using 8085 MP.
	4th	***Possible Question Answer Discussion***
	5th	**Chapter 4.0 Microprocessor based system development aids.** Concept of interfacing
	6th	Define Mapping &Data transfer mechanisms - Memory mapping & I/O Mapping.
7th	1st	Concept of Memory Interfacing:- Interfacing EPROM & RAM Memories.
	2nd	**Monthly Test**
	3rd	Concept of Address decoding for I/O devices
	4th	Programmable Peripheral Interface: 8255.
	5th	ADC & DAC with Interfacing.

	6th	Interfacing Seven Segment Displays
8th	1st	Generate square waves on all lines of 8255
	2nd	Design Interface a traffic light control system using 8255.
	3rd	Design interface for stepper motor control using 8255.
	4th	***Possible Question Answer Discussion***
	5th	**Chapter 5.0 Microprocessor (architecture and programming- 16 bit-8086)** Register Organization of 8086.
	6th	Internal architecture of 8086
9th	1st	Signal Description of 8086
	2nd	General Bus Operation& Physical Memory Organization
	3rd	Minimum Mode &Timings,
	4th	Maximum Mode &Timings,
	5th	Interrupts and Interrupt Service Routines, Interrupt Cycle.
	6th	Non-Mask able Interrupt, Mask able Interrupt
10th	1st	8086 Instruction Set & Programming: Addressing Modes of 8086 MP.
	2nd	Instruction Set, Assembler Directives and Operators,
	3rd	**Monthly Test**
	4th	Simple Assembly language programming using 8086 instructions
	5th	***Possible Question Answer Discussion***
	6th	**Chapter 06 Microcontroller (architecture and programming-8bit)** Distinguish between Microprocessor & Microcontroller
11th	1st	8 bit & 16 bit microcontroller
	2nd	CISC & RISC processor
	3rd	Architecture of 8051Microcontroller
	4th	Signal Description of 8051Microcontrollers
	5th	Memory Organization-RAM structure, SFR

	6th	Registers,timers,interruptsof8051Microcontrollers
12th	1st	Addressing Modes of 8051
	2nd	Simple 8051 Assembly Language Programming Arithmetic& Logic Instructions.
	3rd	JUMP, LOOP, CALL Instructions, I/O Port Programming.
	4th	Interrupts, Timer & Counters
	5th	Serial Communication
	6th	Microcontroller Interrupts and Interfacing to 8255
13th	1st	**Monthly Test**
	2nd	***Possible Question Answer Discussion***
	3rd	Review Class for Chapter No.- 01
	4th	Review Class for Chapter No.- 02
	5th	Review Class for Chapter No.- 02
	6th	Review Class for Chapter No.- 02
14th	1st	Review Class for Chapter No.- 03
	2nd	Review Class for Chapter No.- 03
	3rd	Review Class for Chapter No.- 03
	4th	Review Class for Chapter No.- 04
	5th	Review Class for Chapter No.- 05
	6th	Review Class for Chapter No.- 06
15th	1st	Review Class for Chapter No.- 06
	2nd	Previous Year (S- 22) Question Answer Discussion
	3rd	Previous Year (S- 22) Question Answer Discussion
	4th	Previous Year (S- 21) Question Answer Discussion
	5th	Previous Year (S- 21) Question Answer Discussion
	6th	Previous Year (S- 21) Question Answer Discussion

Chapters covered up to IA: ***1, 2,3 & 4.***