

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

MICRO PROCESSOR & MICRO CONTROLLER (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 (4 th)	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
1 st	1 st	Chapter-1 Microprocessor (Architecture and Programming-8 bit-8085) Introduction to Microprocessor and Microcomputer
	2 nd	Distinguish between Microprocessor and Microcomputer.
	3 rd	Concept of Address bus, data bus, control bus & System Bus
	4 th	General Bus structure Block diagram.
	5 th	Basic Architecture of 8085 (8 bit) Microprocessor
	6 th	Basic Architecture of 8085 (8 bit) Microprocessor
2 nd	1 st	Signal Description (Pin diagram) of 8085 Microprocessor
	2 nd	Register Organizations, Distinguish between SPR & GPR
	3 rd	Timing & Control Module,
	4 th	Stack, Stack pointer & Stack top.
	5 th	Interrupts:-8085 Interrupts,
	6 th	Masking of Interrupt(SIM,RIM)
3 rd	1 st	Possible Question Answer Discussion
	2 nd	Chapter-2 Instruction Set and Assembly Language Programming (8 bit) Addressing data & Differentiate between one-byte, two-byte & three-byte instructions with examples.
	3 rd	Addressing modes in instructions with suitable examples.
	4 th	Instruction Set of 8085-Data Transfer instruction set.
	5 th	Arithmetic Instruction set, Branching instruction
	6 th	Logical instruction set, Stack& I/O , Machine Control instruction

4 th	1 st	Simple Assembly Language Programming of 8085- Simple Addition of two 8 bit numbers, Subtraction of two 8 bit numbers.
	2 nd	Logic Operations (AND, OR operation.) Complement:- 1's & 2's complement & Masking of bits
	3 rd	Counters & Time delay (Single Register, Register Pair, More than Two Register)
	4 th	Looping, Counting & Indexing (Call/JMP etc.).
	5 th	Stack & Subroutines programs. Code conversion, BCD Arithmetic 16 Bit, Data Operation, Block Transfer.
	6 th	Monthly Test
5 th	1 st	Program to Compare between two numbers using 8085 MP.
	2 nd	Array Handling (Largest number & smallest number in the array), Memory & I/O Addressing
	3 rd	Possible Question Answer Discussion
	4 th	Chapter-3 Timing diagrams Define opcode, operand, T-State, Fetch cycle, Machine Cycle, Instruction cycle & discuss the concept of timing diagram.
	5 th	Draw timing diagram for memory read, memory write Machine cycle
	6 th	Draw timing diagram for I/O read, I/O write machine cycle.
6 th	1 st	Draw timing diagram for I/O read, I/O write machine cycle.
	2 nd	Draw a neat sketch for the timing diagram for 8085 instruction (MOV instruction).
	3 rd	Draw a neat sketch for the timing diagram for MVI, LDA instruction) Using 8085 MP.
	4 th	Possible Question Answer Discussion
	5 th	Chapter 4.0 Microprocessor based system development aids. Concept of interfacing
	6 th	Define Mapping & Data transfer mechanisms - Memory mapping & I/O Mapping.
7 th	1 st	Concept of Memory Interfacing:- Interfacing EPROM & RAM Memories.
	2 nd	Monthly Test
	3 rd	Concept of Address decoding for I/O devices
	4 th	Programmable Peripheral Interface: 8255.
	5 th	ADC & DAC with Interfacing.

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

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

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

