Sardar Vallabhbhai Patel Institute Of Technology- VASAD

ACADEMIC YEAR 2023-24(EVEN SEM)

Name: Parul V. Bakaraniya **Subject: Microprocessor and interfacing** **Hrs/Week: 3**

Designation: Assistant Professor **Subject code : 3160712** **Total weeks: 14**

Department: Computer **Class: T.Y.-CE** **Semester: 6th CE** **Total Hrs: 42**

Sr no.	Details of Topics to be Covered in one lecture from GTU syllabus	Proposed Date	Actual Date
	Syllabus Lesson No .1 Introduction to Microprocessor		
1	Introduction to Microprocessor		
2	Components of a Microprocessor: Registers, ALU and control & timing		
3	System bus (data, address and control bus)		
4	Microprocessor systems with bus organization		
	Syllabus Lesson No.2 8085 block diagram		
5	Microprocessor Architecture and Operations		
6	Memory, I/O devices		
7	Memory and I/O operations		
	Syllabus Lesson No.3 8085 Timing diagram		
8	8085 Microprocessor Architecture, Address, Data And Control Buses		
9	8085 Pin Functions		
10	Demultiplexing of Buses, Generation Of Control Signals		
11	Instruction Cycle, Machine Cycles, T-state, Timimg Diagram of Meory read and memory write instructions		
12	Timing Diagram of MVI. STA, instructions		
13	Timing Diagram of IN, OUT instructions, Quiz		
	Syllabus Lesson No.4 Assembly Language Programming Basics		
14	Classification of Instructions		
15	Addressing Modes of 8085		
16	8085 Instruction Set with small example		
17	Instruction And Data Formats		

18	Writing, Assembling & Executing A Program Debugging The Programs.		
19	Assembly language programs for different instructions.		
	Syllabus Lesson No.5 8085 assembly language programs		
20	Writing 8085 assembly language programs		
21	Writing 8085 assembly language programs with decision making		
22	Writing 8085 assembly language programs with looping using data transfer		
23	Writing 8085 assembly language programs with arithmetic, logical and branch instructions		
24	8085 programs with string instructions		
25	8085 programs with processor control instructions		
	Syllabus Lesson No.6 Counter and time delay		
26	Stack & Subroutines		
27	Developing Counters and Time Delay Routines		
28	Counters and time delay programs		
29	Code conversion concept		
30	BCD Arithmetic and 16 bit operations		
31	Code conversion Programs		
	Syllabus Lesson No.7 Interfacing Concept		
32	Interfacing Concepts,Ports		
33	Interfacing Of I/O Devices		
34	Interrupts In 8085		
35	Programmable Interrupt Controller 8259A		
36	Programmable Peripheral Interface 8255A		
37	Examples of Memory Interfacing and I/O interfacing		
	Syllabus Lesson No.8 Advanced Microprocessors		
38	8086 logical block diagram		
39	segmentation,Pin functions, Minimum and maximum mode		
40	80286/80386: Overview and architecture		
41	Programming model, Data types and instruction set		
42	segments and its types,segment descriptor, descriptor table and selectors		

Refrence Book: Microprocessor Architecture, Programming, and Applications with the 8085, Ramesh S. Gaonkar Pub: Penram International.

Date of preparation: 8/1/2024

Signature of faculty: **HOD signature**