

State Institute of Engineering and Technology

Department of Electrical Engineering

Lesson Plan

Name of Faculty: Ms. Jubby

Subject Name: Microprocessor and Microcontroller

Semester: 5th sem

Subject Code: B24-EE-307

Lecture No.	Unit no.	Topic	COs covered
1	Unit-1	8086 CPU Architecture : Introduction	CO1
2		8086 Block Diagram	
3		Description of Data Registers, Address Registers	
4		Pointers and index Registers	
5		Program Status Word(PSW)	
6		Queue, BIU and EU	
7		8086 Pin Diagram and Pin Descriptions	
8		Generating 8086 CLK and reset signals using 8284	
9		Microprocessor BUS types	
10		Buffering Techniques	
11		8086 minimum mode and Maximum mode CPU modules	
12	Unit-2	8086 Instruction set : Introduction	CO2
13		Instruction Formats	
14		Addressing Modes	
15		Data Transfer instructions, String Instructions	
16		Logical Instructions, Arithmetic Instructions	
17		Transfer of Control Instructions, Process Control Instruction	
18		Assembler Directives	
19		8086 Programming Techniques	
20		Writing Assembly Language Programs for Logical Processing, Arithmetic Processing	
21		Timing Delays	
22		Loops	
23		Data Conversions	
24	Unit-3	8051 Microcontroller Main Memory System Design	CO3
25		8051 Architecture- Registers, Pin diagrams, I/O Ports Function	
26		Internal Memory Organization	
27		Memory Devices	
28		8086 CPU Read/Write Timing Diagrams in Minimum Mode and Maximum Mode	
29		Address Decoding Techniques	
30		Interfacing SRAMS, ROMS/PROMS	

31	Unit-4	Basic I/O Interface	CO4
32		Intel's 8255 - Description and Interfacing With 8086	
33		ADCs and DACs	
34		Types, Operations and Interfacing with 8086	
35		8086 Interrupt Mechanism	
36		Interrupt Types	
37		Interrupt Vector Table	
38		Applications of Interrupts	
39		Intel's 8259	

Text Books:

1. Barry B. Brey, "The Intel Microprocessor 8086/8088, 80186", Pearson Education, Eighth Edition, 2009
2. D.V. Hall, Microprocessors and Interfacing, McGraw Hill 3rd ed.
3. Liu, Gibson, "Microcomputer Systems: The 8086/88 Family", 2nd Edition, PHI.
4. Kenneth Ayala, "The 8086 Microprocessor: Programming & Interfacing the PC", Cengage Learning, Indian Edition, 2008.

Reference Books:

1. Kip Irvine, "Assembly language for IBM PC", PHI, 2nd Edition, 1993
2. Uffenback, "The 8086 Family Design" PHI, 2nd Edition.
3. Walter A Triebel and Avtar Singh; The 8088 and 8086 Microprocessors, Programming, Interfacing, Software, Hardware and Applications, Fourth Edition, Pearson Education.