IV Year B.Tech. EEE   I - Semester

L	T	P	TO	C
-	-	3	3	2

EE433 MICROPROCESSOR PROGRAMMING AND ITS INTERFACING LAB

Course Description & Objectives:

To develop the programming fundamentals of 8086 Microprocessor kit. To interface 8086 Microprocessor kit with external peripherals. To develop the programming concepts in TASM

Course outcomes:

l *Able to understand the instruction set of 8086 Microprocessor*
l *Able to work with 8086 Microprocessor and Microcontroller*
l *Able to interface a Microprocessor for specific applications.*
l *Able to develop the programming with TASM*

I. Programming of Microprocessor 8086:

1. Introduction to Debug/MASM/TASM
2. Arithmetic operations: Multi-byte Addition, Subtraction, Multiplication, Division.
3. Logical operations: Converting packed BCD to unpacked BCDand BCD to ASCII.
4. Finding Arithmetic mean of given numbers.
5. Finding Sum of Squares, Cubes of given numbers.
6. Searching for Minimum,Maximum of given numbers.
7. Sorting given string in Ascending,Descending order.
8. Reading, Displaying of characters.
9. String operations: Moving, Reversing, Comparing, Scanning strings.

II. Interfacing of Microprocessor 8086:

1. Programable Peripheral Interface-8255.
2. Interfacing DAC: to generate Square, Triangular, Ramp, Staircase waves.
3. Interfacing ADC: to convert analog signal to digital.
4. 8279-Keyboard/ Display interface.
5. Interfacing 8259-Programmable Interrupt Controller.
6. Interfacing a Stepper motor.
7. Interfacing Elevator simulator.
8. Traffic control simulator interface.
9. Serial data transfer using USART-8251 interface.

Any 5 from each of the above two groups must be chosen.