Year & Semester   : II-II(CSE)

Lab In charges

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MICROPROCESSORS AND INTERFACING LABORATORY

Course Objectives:

1. To become skilled in 8086 Assembly Language programming.
2. To understand programmable peripheral devices and their Interfacing.
3. To understand and learn 8051 microcontroller.
4. To learn 8051 assembly Language programming

Course Outcomes:

1. Able to write8086 Assembly Language programs.
2. Able to understand programmable peripheral devices and their Interfacing.
3. Able to write 8051 assembly Language programs.

List of Experiments:

I)   8086 Microprocessor Programs using MASM/8086 kit.
1. Introduction to MASM Programming.
2. Arithmetic operation – Multi byte Addition and Subtraction, Multiplication and Division – Signed and unsigned Arithmetic operation, ASCII – arithmetic operation.
3. Logic operations – Shift and rotate – Converting packed BCD to unpacked BCD, BCD to ASCII conversion.
4. By using string operation and Instruction prefix: Move Block, Reverse string, Sorting, Length of the string, String comparison.

Interfacing:
1. 8259 – Interrupt Controller and its interfacing programs
2. 8255 – PPI and its interfacing programs (A /D, D/A, stepper motor,)
3. 7-Segment Display.

II)   Microcontroller 8051 Trainer kit
1. Arithmetic operation – Multi byte Addition and Subtraction, Multiplication and Division – Signed and unsigned Arithmetic operation.
2. Logic operations – Shift and rotate.
3. Sorting- Ascending and descending order.

Interfacing using 8051 Trainer kit:
1. Key board Interfacing
2. Seven Segment display
3. Switch Interfacing
4. Relay Interfacing
5. UART

Minimum **Ten** Experiments to be conducted (**Five** from each section).