III Year-II Semester		L	T	P	C
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MICRO MPROCESSORS AND MICRO CONTROLLERS LAB (R1632027)

Prerequisite Course:

Micro Mprocessors And Micro Controllers

Course Description and Objectives:

1. To study programming based on 8086 microprocessor and 8051 microcontroller.
2. To study 8086 microprocessor based ALP using arithmetic, logical and shift operations.
3. To study to interface 8086 with I/O and other devices.
4. To study parallel and serial communication using 8051& PIC 18 micro controllers.

CourseOutcomes:

Upon completion of the course, the student will be able to achieve the following outcomes.

Cos	CourseOutcomes	POs
1	Will be able to write assembly language program using 8086 micro based on arithmetic, logical, and shift operations.	5
2	Will be able to interface 8086 with I/O and other devices.	5
3	Will be able to do parallel and serial communication using 8051 & PIC 18 micro controllers.	5

Syllabus:

Any 10 of the Following Experiments are to be conducted

1. Arithmetic operation – Multi byte addition and subtraction, multiplication and division – Signed and unsigned arithmetic operation, ASCII – Arithmetic operation.
2. Logic operations – Shift and rotate – Converting packed BCD to unpacked BCD, BCD to ASCII conversion.
3. By using string operation and Instruction prefix: Move block, Reverse string Sorting, Inserting, Deleting, Length of the string, String comparison.
4. Interfacing 8255–PPI
5. Interfacing 8259 – Interrupt Controller.
6. Interfacing 8279 – Keyboard Display.
7. Stepper motor control using 8253/8255.
8. Reading and Writing on a parallel port using 8051
9. Timer in different modes using 8051
10. Serial communication implementation using 8051
11. Understanding three memory areas of 00 – FF Using 8051 external interrupts.
12. Interface PIC 18 with an optoisolator
13. Interface PIC 18 with a DC motor