

**SEMESTER VI**  
**EC1607 MICROPROCESSORS AND MICROCONTROLLERS LABORATORY**

**LIST OF EXPERIMENTS**

**8086 Programs using kits**

1. Basic arithmetic and Logical operations
2. Code conversion and Decimal arithmetic operations
3. Matrix operations
4. String manipulations
5. Sorting and Searching

**Peripherals and Interfacing**

1. Traffic light controller Interface
2. Stepper motor control Interface
3. Key board and Display Interface
4. Parallel interface
5. A/D and D/A interface
6. Timer Interface

**8051 Programs and Interfacing**

1. Basic arithmetic and Logical operations
2. Square and Cube program, 2's complement of a number, Unpacked BCD to ASCII
3. 8051 Timer/Counter Programming
4. 8051 Parallel and Serial Port Programming
5. Stepper motor control Interface

**MSP430 Programs and Interfacing using CCS**

1. Arithmetic Instructions – Addition, subtraction, multiplication and division
2. Square, Cube
3. ADC & DAC Interface
4. Stepper motor control interface to MSP

### **LIST OF EQUIPMENT**

| <b>Sl.No.</b> | <b>Description of Equipment</b>                  |
|---------------|--------------------------------------------------|
| 1.            | 8086 Microprocessor trainer kit with powersupply |
| 2.            | 8051 Microcontroller trainer kit                 |
| 3.            | Interfacing Components                           |
| 4.            | MSP 430 Microcontroller Kit                      |
| 5.            | Personal Computers ( INTEL 7)                    |
| 6.            | Code Composer Studio                             |