

Department: Electrical and Electronics Engineering

LIST OF EXPERIMENTS  
MICROPROCESSOR AND MICROCONTROLLER LAB  
KEE-652

**Note: Minimum ten experiments are to be performed from the following list (on 8085 / 8086 microprocessor)**

1. To study 8085 / 8086 based microprocessor system
  2. To perform mathematical operations (addition & subtraction) on two 8-bit numbers
  3. To perform multiplication on two 8-bit numbers
  4. To perform division on two 8-bit numbers
  5. To develop and run a program for finding out the largest number from given two 8-bit numbers
  6. To develop and run a program for finding out the smallest number from given two 8-bit numbers
  7. To develop and run a program for arranging in ascending order of a given set of 8-bit numbers
  8. To develop and run a program for arranging in descending order of a given set of 8-bit numbers
  9. To perform conversion of temperature from degree F to degree C
  10. To perform computation of square root of a given number
  11. To obtain interfacing of 8255 – PPI with 8085 microprocessor
  12. To perform microprocessor based traffic light control
  13. To perform microprocessor based stepper motor operation through 8085 / 8086 kit
- To obtain interfacing of DMA controller with 8085 / 8086 microprocessor

**PART B SUGGESTIVE LIST OF EXPERIMENTS (Through Virtual Lab Link):**

1. Write a program using 8085 Microprocessor for Decimal, Hexadecimal addition and subtraction of two Numbers. **(Through Virtual Lab Link)**
2. Write a program using 8085 Microprocessor for addition and subtraction of two BCD numbers. **(Through Virtual Lab Link)**
3. To perform multiplication and division of two 8 bit numbers using 8085. **(Through Virtual Lab Link)**
4. To find the largest and smallest number in an array of data using 8085 instruction set.
5. To write a program using 8086 to arrange an array of data in ascending and descending order. **(Through Virtual Lab Link)**
6. To convert given Hexadecimal number into its equivalent ASCII number and vice versa using 8086 instruction set.
7. To convert given Hexadecimal number into its equivalent BCD number and vice versa using 8086 instruction set.

**Virtual Lab Link:** [http://vlabs.iitb.ac.in/vlabsdev/labs\\_local/microprocessor/labs/explist.php](http://vlabs.iitb.ac.in/vlabsdev/labs_local/microprocessor/labs/explist.php)

<u>LIST OF EQUIPMENT</u> MICROPROCESSOR AND MICROCONTROLLER LAB KEE-652
8257 Study Card
8255 Study Card
USART 8251 Interfacing Card
Stepper Motor Controller Module
To Study 8085 Microprocessor System
Pentium Processor Trainer
Microcontroller 8051 Kit
Buffer Latch Study Card