Electrical Engineering Department

Subject Name: Basic Electronics

Subject Code: 3110016

Sr.No.	Experiment
1	To measure DC voltage and current, AC voltage and current with multimeter
2	To observe waveform on oscilloscope measure basic parameter amplitude and frequency of sine wave
3	To study and perform V-I characteristics of Diode
4	To study and perform V-I characteristics of Zener diode
5	To study and perform halfwave rectifier with and without filter
6	To study and perform fullwave mid point rectifier with and without filter
7	To study and perform fullwave bridge rectifier with and without filter
8	To study and perform clamper circuit
9	To study and perform clipper circuit
10	To obtain comman emitter characteristics of NPN Transistor
11	Testing of BJT using multimeter
12	To study and perform working of transistor as a switch
13	To obtain characteristics of field effect transistor (FET)
14	To study and verify truth table of basic digital logic gates OR, AND, NOR,NAND, NOT, Ex-OR, Ex-NOR
15	To test individual circuit prepared by the student

Electrical Engineering Department

Subject Name: Industrial Automation

Subject Code: 3170925

Sr.No.	Experiment
1	Introduction of automation system and symbols
2	Simulate analog and digital function blocks
3	Study, understand and perform experiments on timers and counters
4	Logic implementation for traffic Control Application
5	Logic implementation for Bottle Filling Application
6	Tune PID controller for heat exchanger using DCS
7	Implementation of Logic Gates
8	Develop a ladder program for DOL Starter
9	Develop an application using On-Delay Timer
10	Develop an application using OFF-Delay Timer
11	Study of PID controller instruction for a pilot plant

B.E-ELECTRICAL ENGINEERING DEPARTMENT

Subject Name: MICROPROCESSORS AND MICROCONTROLLERS

Subject Code: 3160914

Sr.No.	Experiment
1.	Introduction to 8051 microcontrollers.
2.	To study about Introduction to Microcontroller Lab.
3.	Write an ALP to move a block of data from one internal memory location to other.
4.	(A) Write an ALP to find addition of two 8 bit numbers.
	(B) Write an ALP to find addition of two 16 bit numbers
	(C) Write an ALP to find subtraction of two 16 bit numbers
5.	(A) Write an ALP to find Multiplication of two 8 bit numbers
	(B) Write an ALP to find Multiplication of two 16 bit numbers.
	(C) Write an ALP to find division of two 8 bit numbers
6.	(A)Write an ALP to multiply 25 by 10 using the technique of repeated addition)
	(B) Write an ALP to add the first ten natural numbers
7.	(A) Write an ALP to generate a square wave with a delay of 5 ms on pin P2.3.Asuume a crystal frequency XTAL=11.0592 MHz.Use timer 1 mode 1.
	(B) Write an ALP to generate a square wave with a delay of 5 ms on pin P2.3.Asuume a crystal frequency XTAL=11.0592 MHz.Use timer 1 mode 1.
8.	(A) Write an ALP to generate a square wave with ON time of 3 ms and 10 ms off time on pin P0.3.Asuume a crystal frequency XTAL=22.0 MHz.Use timer 1 mode 1.
	(B) Write a C program to generate a square wave with ON time of 3 ms and 10 ms off time on pin P0.3.Asuume a crystal frequency XTAL=22.0 MHz.Use timer 0 mode 1.
	(C) Write an ALP to generate a square wave of 1 KHz frequency on pin P1.0.Asuume a crystal frequency XTAL=22.0 MHz.Use timer 0 mode 1.
	(D) Write a C Program to generate a square wave of 1 KHz frequency on pin P1.0.Asuume a crystal frequency XTAL=22.0 MHz.Use timer 0 mode 1.
9.	Write an ALP that transmits a message “Happy New Year” using serial mode-1 at 9600 baudrate.Assume Oscillator frequency 11.0592 MHz.
10.	Write an 8051 C program to convert 11111101 (FD hex) to decimal and display the digits on P0, P1 and P2.
11.	(A) Write an 8051 C program to convert packed BCD 0x29 to ASCII and display the bytes on P1 and P2.
	(B) Write an 8051 C program to convert ASCII digits of ‘4’ and ‘7’ to packed BCD and display them on P1.

12.	Write an assembly language program to for toggling the LED connected to one of the port pins of 8051.
13.	Write an assembly language program for interfacing stepper motor with 8051.
14.	Write an assembly language program to display a message in LCD display.
15.	Write an assembly language program to interface EM relay with 8051