S. N. Patel Institute of Technology & Research Centre, Umrakh

(A Vidyabharti Trust Institution)

B.E./Electrical Engineering

Subject Name: Inter Connected Power System

Subject Code: 3160920

Sr. No.	Experiment
1	To study load dispatch centre
2	To perform load frequency control using MATLAB.
3	To study formation of Y-BUS in MATLAB software.
4	To study load flow in power system using Gauss siedel Method
5	To study load flow in power system using Newton Raphson Method
6	To study load flow in power system using Fast Decoupled Load Flow Method
7	To study of 3 Bus Power System Using Power World Simulator.
8	To study of 5 Bus Power System Using Power World Simulator.

B.E-ELECTRICAL ENGINEERING DEPARTMENT

Subject Name: <u>MICROPROCESSORS AND MICROCONTROLLERS</u>

Subject Code: <u>3160914</u>

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

B.E./Electrical Engineering

Subject Name: Power System 1

Subject Code: 3140914

Sr.No.	Experiment
1	Survey of generation scenario and power plant of Gujarat.
2	To study Thermal Power Plant.
3	To study Hydro Power Plant.
4	To study Nuclear Power Plant.
5	Plot characteristics of Solar Cell.
6	Simulation of 3-Phase system with balanced load.
7	Simulation of three phase system with three phase load, effect of unbalanced load on the voltages of phases with and without neutral grounded.
8	Write program to calculate string efficiency.
9	Write a program to calculate line inductance.
10	Write a program to calculate line capacitance.
11	Draw layout of Substation and its components.

Electrical Engineering Department

Subject Name: Power System-II

Subject Code: 3150911

Sr.No.	Experiment
1	To write computer program for plotting instantaneous voltage,current aand power in a single phase ac circuit.
2	To write computer program and obtain voltage regulation and efficiency of short transmission line for different specified set of receiving end quantities.
3	To write computer program program and obtain voltage regulation and efficiency of medium transmission line
4	To write computer program program to calculate voltage regulation and efficiency of long transmission line using pi model.
5	To study and analyze per unit system by open source software.
6	To develop program for formulation of ZBUS matrix through ZBUS building algorithm.
7	To develop program to transform symmetrical components in to its original phasors.
8	To analyze line to ground fault in power system(using program/simulation)
9	To analyze double line to ground fault in power system(using program/simulation)