POWER SYSTEM & SIMULATION LAB-I

Course Code: 15EE2106 **L P C**
0 3 2

Pre requisites: Power System Analysis, Power System Operation & Control

Course Outcomes: At the end of this Course, the student will be able to
CO1: Analyze and interpret data on various power system components.
CO2: Simulate various power system control using modern software tools.
CO3: Determine various faults using Generator protection Module.
CO4: Measure various parameters using Digital storage oscilloscope.
CO5: Analyze transient stability using MiPower.

LIST OF EXPERIMENTS

1. Develop a program to solve Swing Equation.
2. Measurement of earth resistance
3. Study and testing of over current and over voltage relay in Generator protection system.
4. Develop a Simulink model for a single area load frequency problem and simulate the same.
5. Write a program to find Y-bus & Z-bus
6. Observation and analysis of transient response in a synchronous machine during an L-G fault
by using a digital storage oscilloscope.
7. Simulate a transmission line and find
   i. Ferranti effect, ii. Efficiency
8. Economic load dispatch without and with transmission loss using MiPower.
9. Design a PID controller.
10. Fault Analysis of 3 phase alternator
   i) LG Fault ii) LL Fault
   iii) LLG Fault iv) LLLG Fault