PS5111 POWER SYSTEM SIMULATION LABORATORY

DETAILED SYLLABUS

OBJECTIVES

- To have hands on experience on various system studies and different techniques used for system planning using Software packages
- To perform the dynamic analysis of power system

LIST OF EXPERIMENTS

1. Power flow analysis by Newton-Raphson method and Fast decoupled method
2. Transient stability analysis of single machine-infinite bus system using classical machine model
3. Contingency analysis: Generator shift factors and line outage distribution factors
4. Economic dispatch using lambda-iteration method
5. Unit commitment: Priority-list schemes and dynamic programming
6. State Estimation (DC)
7. Analysis of switching surge using EMTP: Energisation of a long distributed- parameter line
8. Analysis of switching surge using EMTP : Computation of transient recovery voltage
9. Simulation and Implementation of Voltage Source Inverter
10. Digital Over Current Relay Setting and Relay Coordination using Suitable software packages
11. 11 Co-ordination of over-current and distance relays for radial line protection