

Course Outcome:	
At the end of the course student will be able to:	
CO.ETEE.352.1	Understand the behavior of power system protection by the study of LG & LLL fault.
CO.ETEE.352.2	Plot & study various relays like differential relay, over current, IDMT relay etc.
CO.ETEE.352.3	Provide suitable circuit protection of power system by performing tests on MCB & HRC Fuse.
CO.ETEE.352.4	Integrate all the above three for building up a composite protective system for power system.

List of Experiments:

1. To study single line to Ground fault as practical application in transmission lines. (Using Experimental setup).
2. To study three phase fault as practical application in transmission lines. (Using Experimental setup).
3. To determine the characteristics of the given differential relay and to apply the relay for the protection of a transformer against internal faults. (Using Experimental setup).
4. To study instantaneous over current relay. (Using Experimental setup)
 - (1) Study the construction of relay.
 - (2) Study the operating and deoperating of relay.
 - (3) Study the current vs. time characteristics.
5. To study over voltage relay static type and draw its characteristics. (Using Experimental setup)
6. To study the characteristics of miniature-circuit breaker. (Using Experimental setup)
7. To study the operating characteristics of HRC fuse. (Using Experimental setup)
8. To obtain the characteristics of thermal bimetallic relay. (Using Experimental setup)
9. To study the characteristics of IDMT Earth fault relay. (Using Experimental setup)

NOTE:- At least 8 Experiments out of the list must be done in the semester.

Sr. No.	Title of Lab Experiments	CO
1.	To study single line to Ground fault as practical application in transmission lines.	CO1, CO4
2.	To study three phase fault as practical application in transmission lines.	CO1, CO4
3.	To study instantaneous over current relay.	CO2, CO4
4.	To study over voltage relay static type and draw its characteristics.	CO2, CO4
5.	To study the characteristics of miniature-circuit breaker.	CO3, CO4
6.	To study the operating characteristics of HRC fuse	CO3, CO4
7.	To obtain the characteristics of thermal bimetallic relay.	CO2, CO4
8.	To study the characteristics of IDMT Earth fault relay.	CO2, CO4
Extra 1	Simulation based on Load flow analysis.	
Extra 2	Simulation based on Short circuit analysis.	