

(3 Hours)

Total Marks – 80

- N.B.:-** (1) Question No.1 is compulsory.
 (2) **Attempt** any **three** questions out of remaining **five** questions.
 (3) Draw neat diagrams wherever it is necessary.

- Q 1. Answer the following questions. 20
- A) Explain time-grading & current-grading used in protection system.
- B) Explain the importance of instrument transformers in power system protection
- C) What do you mean by resistance switching
- D) Why reactance relay is used for earth faults.
- Q 2 a) Compare Static and Electromechanical Relays in detail 10
- Q 2 b) What is meant by HRC fuse? Explain the working and cut off characteristics of HRC fuse. 10
- Q 3 a) Draw & explain three step distance relaying scheme for the protection of transmission line. 10
- Q 3 b) Draw & explain a scheme for motor against single phasing. 10
- Q 4 a) Explain phenomenon of current chopping and its effect in the circuit breakers. 10
- Q 4 b) Explain construction & working of Vacuum circuit breaker. 10
- Q 5 a) Differentiate between BOCB and MOCB. 10
- Q 5 b) Explain restricted earth fault protection of alternator. How 100 % winding is protected? 10
- Q 6 a) Explain Carrier Aided Distance protection for transmission line. 10
- Q 6 b) Explain effect of power swing in distance relays. 10
