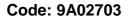


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B.Tech IV Year I Semester (R09) Supplementary Examinations June 2017 SWITCH GEAR & PROTECTION

(Electrical & Electronics Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions All questions carry equal marks

- 1 (a) What are CB ratings and specifications of circuit breakers?
 - (b) Explain about resistance switching in circuit breaker.
- 2 (a) Explain construction and operation of air blast circuit breaker with neat sketch.
 - (b) Explain construction and operation of SF_6 circuit breaker with neat sketch.
- 3 (a) What are the functional characteristics of protective relays?
 - (b) Explain the construction and operation of induction type relay with neat sketch.
- 4 (a) Write the advantages and disadvantages of microprocessor based relays.
 - (b) Draw the block diagram for distance relay and its flow chart.
- 5 (a) Explain the protection of generator against stator faults.
 - (b) Explain the restricted earth fault protection in alternator.
- 6 (a) A three phase transformer has a voltage ratio of 33 kV: 6.6 kV and is star/delta connected. The rating of C.T at 6.6 kV side is of 500/5 in each phase. What must be the ratio of protective C.T on H.V side?
 - (b) Describe with the aid of diagram of connections for Merz price circulating current system for the protection of transformers.
- 7 (a) Explain about the protection of feeder using over current relays.
 - (b) Explain about carrier current protection scheme.
- 8 Write short notes on:
 - (a) Insulation coordination.
 - (b) Valve type and zinc oxide lightning arrestors.
