

SREE VIDYANIKETHAN ENGINEERING COLLEGE

(An Autonomous Institution, Affiliated to JNTUA, Ananthapuramu)

IV B.Tech I Semester (SVEC-16) Regular/Supplementary Examinations February - 2021**SWITCHGEAR AND PROTECTION**
[Electrical and Electronics Engineering]

Time: 3 hours

Max. Marks: 70

Answer One Question from each Unit
All questions carry equal marks**UNIT-I**

1. Elucidate the operation of Electromagnetic Induction disc type relay with relevant diagrams. Also derive the torque equation. CO2 14 Marks

(OR)

2. a) Elucidate the advantages of static relays over electromagnetic relays. CO1 7 Marks
b) Draw the block diagram of Microprocessor based over current relay and explain. CO2 7 Marks

UNIT-II

3. a) Elucidate the operation of HRC fuse with diagram. CO5 7 Marks
b) Elaborate on the application of Air, Oil, Vacuum, SF6 circuit breakers. CO5 7 Marks

(OR)

4. a) Elaborate arc interruption theories. CO1 10 Marks
b) Analyze current chopping. CO1 4 Marks

UNIT-III

5. Elaborate carrier current protection scheme for transmission line protection. CO2 14 Marks

(OR)

6. Design a differential protection scheme for star-delta transformer. CO5 14 Marks

UNIT-IV

7. Elucidate the causes of over voltages in power system. CO1 14 Marks

(OR)

8. Compare time graded and current graded protection schemes for feeders. CO4 14 Marks

UNIT-V

9. Analyze the use of Peterson coil with Phasor diagram for grounding. CO3 14 Marks

(OR)

10. a) Elucidate grounding practice with diagram. CO6 7 Marks
b) Discuss the advantages and disadvantages of ungrounded neutral systems. CO6 7 Marks

