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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech III Year II Semester Supplementary Examinations February-2022

SWITCH GEAR AND PROTECTION

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 Explain the principle and operation of Air Blast Circuit Breakers. 12M

OR

- 2 Distinguish between SF6 circuit breakers and vacuum circuit breakers. 12M

UNIT-II

- 3 Explain the construction and working of induction type Non directional over current relay with diagram. 12M

OR

- 4 Distinguish between over current relays, directional relays and differential relays. 12M

UNIT-III

- 5 Explain with a neat sketch, the operation of Buchholz relay? 12M

OR

- 6 A 3-Phase transformer of 220/11000 line volts is connected in star/delta. The protective transformers on 220v side have a current ratio of 600/5. What should be the CT ratio on 11,000v side 12M

UNIT-IV

- 7 With neat sketch Explain the Merze price voltage balance systems in 3-Phase line. 12M

OR

- 8 With neat Diagram Explain the Three zone distance protection in 3-Phase transmission line. 12M

UNIT-V

- 9 a Explain the protection of Ring main feeder using over current relays. 6M

- b What are the advantages and disadvantages of carrier-current protection? 6M

OR

- 10 a What are the requirements of protection of transmission lines? 6M

- b Explain the protection of Radial feeder using over current relays. 6M

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