

Reg. No: SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech III Year II Semester Supplementary Examinations Dec 2019

SWITCH GEAR AND PROTECTION

(Electrical & Electronics Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Explain briefly about various switch gear components and Give the importance of ratings and specifications of circuit breaker. **8M**
b What are the different methods of arc extinction? **4M**

OR

- 2 Explain the principle and operation of Air Blast Circuit Breaker and its applications. **12M**

UNIT-II

- 3 Explain the differential protection and State the various applications of differential Protection. **12M**

OR

- 4 Write a short note on following : **12M**
i) Define relay ii) Define amplitude and phase comparator iii) Define primary and back-up protection iv) Characteristics of over current relay.

UNIT-III

- 5 a Explain with a neat diagram and the applications of the Merz-Price circulating current system to the protection of alternators. **8M**
b What precautions must be taken in installing this system? **4M**

OR

- 6 a Discuss the different transformer faults. **7M**
b What are the various protections schemes available for transformers? **5M**

UNIT-IV

- 7 a Explain any one bus bar protection scheme in detail. **8M**
b What is back up protection of bus bar? **4M**

OR

- 8 a Write short notes on Tran slay scheme. **5M**
b With a neat sketch develop the duplicate bus bar system. **7M**

UNIT-V

- 9 a Explain the various methods of over voltage protection of overhead transmission lines. **10M**
b Define switching surges. **2M**

OR

- 10 a Explain the different types of lightning arresters. **10M**
b What is BIL? **2M**

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