



Reg. No. :

Question Paper Code : 42511

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

Seventh Semester

Electrical and Electronics Engineering

EE 2402 – PROTECTION AND SWITCHGEAR

(Regulations 2008)

(Common to PTEE 2402 – Protection and Switchgear for B.E. (Part-Time)

Sixth Semester – EEE – Regulations 2009)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A **(10×2=20 Marks)**

1. Define primary protection.
2. What is meant by earthing ?
3. What is electromagnetic relay ?
4. What is the principle of distance relay ?
5. Give the various generator protections.
6. Define the term burden on CT.
7. List the various arc extinction methods.
8. What is resistance switching ?
9. Classify the circuit breakers.
10. What is type test ?

PART – B

(5×16=80 Marks)

11. a) Explain in detail the essential qualities of protection. **(16)**
- (OR)
- b) Describe the protection scheme employed to protect from lightning and switching effects. **(16)**



12. a) Discuss the construction and principle of operation of non-directional induction type relay. (16)

(OR)

- b) i) List the merits and demerits of static relays over electromagnetic relays. (6)
ii) Explain the construction, principle of operation of negative sequence relay. (10)

13. a) Briefly discuss the protective methods used for the protection of large Transformer.

(OR)

- b) Describe the types of protective schemes employed for the protection of Busbar.

14. a) i) Discuss the various theories to explain the arc interruption. (8)
ii) Explain the DC circuit breaking. (8)

(OR)

- b) Derive an expression for Restriking voltage and rate of rise of restriking voltage in a Circuit Breaker.

15. a) Describe the principle constructional features of air blast CB. Give its advantages and disadvantages. (16)

(OR)

- b) Discuss different types of testing of circuit breakers. Explain in detail the synthetic testing of circuit breaker.