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**Question Paper Code : 50494**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017  
Seventh Semester  
Electrical and Electronics Engineering  
EE6702 – PROTECTION AND SWITCHGEAR  
(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. What is primary protection ?
2. Give the types faults.
3. Write the torque equation of the universal relay.
4. Give the principle of negative sequence relay.
5. Why secondary of transformer should not be opened ?
6. List the types of busbar protection.
7. Define static relay.
8. What is phase comparator ?
9. State the Slepian theory for arc interruption.
10. Define symmetrical breaking capacity.

PART – B

(5×16=80 Marks)

11. a) Explain the various methods of neutral grounding.

(OR)

- b) What are the essential qualities of protective relay ? Explain in detail.

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12. a) With neat diagram explain the various types of electromagnetic relays.

(OR)

b) Describe the construction and principle of operation of non-directional Induction type over current Relay.

13. a) Give a brief account on the protection of generator using differential and biased differential protection scheme.

(OR)

b) Give a brief account on the faults and protection of transformers.

14. a) Explain with neat block diagram the operation of static relay and list the advantages and disadvantages.

(OR)

b) Describe the operation of static over current relay with neat diagram.

15. a) Write short notes on :

- i) Current chopping
- ii) Resistance switching

(OR)

b) Describe the construction and principle of operation of Air blast circuit breaker.