



C14-EE-603

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**BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DEEE-SIXTH SEMESTER EXAMINATION**

POWER SYSTEMS-III

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

Instructions :

1. Answer **All** questions.
2. Each question carries **Three** marks.
3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. State the purpose of isolator.
2. Give any three properties of SF₆ gas.
3. Explain the necessity of current limiting reactor?
- * 4. Classify the relays based on the Principal of operation?
5. List the advantages of thermal relays.
6. What are the effects of faults on an alternator.
7. Write short notes on pilot wire protection scheme.
8. State the necessity of Bus-bar protection?
9. List the types of lightning arresters.
10. Write any three advantages of neutral grounding.

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PART-B

10X5=50

- Instructions* : *
1. Answer any **Five** questions, choosing at least one from each section.
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Explain the construction and working of minimum oil circuit breaker with neat sketch.
12. (a) Mention any three properties of fuse material.
(b) A generating station has two alternators of ratings 4,000 KVA and 6,000KVA and of percentage reactances 10% and 8% respectively connected from the common bus-bars, the load is taken to the feeder through a 12,000 KVA transformer of 5% reactance. What should be the short circuit KVA and the approximate rating of circuit- breaker in each feeder?
13. Explain the working of Induction type over current relay with neat sketch.
14. (a) Explain the working of Impedance relay.
(b) Explain the protection of ring main feeders using directional relays.
15. Explain the differential protection for alternator with neat sketch.
16. Explain the working of Buchholz relay and its protection scheme for transformer.
17. Explain the protection of transmission line using distance and impedance relays.
18. Explain the working of valve type lightning arrestor with neat sketch.

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