



C14-EE-603

4745

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DEEE - VI SEMESTER EXAMINATION

POWER SYSTEM - III

Time : 3 Hours]

[Total Marks : 80

PART - A

3×10=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 What do you understand by switchgear ? List any four switchgear devices.
- 2 State any six properties of SF₆ gas.
- 3 What are the functions of a fuse ? Give the names of four materials that can be used as fuse element.
- 4 List the six basic requirements of relays.
- 5 Write about the merits and demerits of thermal relays.
- 6 Mention any six probable faults in alternator stator and rotor.
- 7 What is meant by time graded protection ?
- 8 Explain the operating principle of pilot wire protection.
- 9 What is meant by voltage surge ? Give three causes for voltage surge.
- 10 Define neutral grounding. Write any four methods of neutral grounding.

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PART - B**10×5=50**

- Instructions :**
- (1) Answer any **FIVE** questions.
 - (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 Describe the methods of arc quenching.
 - 12 What are current limiting reactors ? Describe about the types of reactors.
 - 13 Explain the principle of operation and working of impedance relay.
 - 14 (a) List the functions of distance relay.
(b) Write about the protection of parallel feeders using directional relay.
 - 15 (a) Write a note on excessive heating problem of alternator stator.
(b) Write about any two methods of earth fault protection of alternator rotor.
 - 16 Explain the differential protection of Star/Delta power transformer with the help of a neat sketch.
 - 17 Explain the protection of transmission lines using distance relay.
 - 18 Explain the construction and operation of Thyrite type lighting arresters.
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