C14-EE–603

4743

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DEEE - SIXTH SEMESTER EXAMINATION

POWER SYSTEMS - III
(SWITCH GEAR AND PROTECTION)

Time : 3 hours] [*Total Marks* : 80

PART—A 4×5=20

Instructions : (1) Answer *any* **five** questions.
(2) Each question carries **four** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define switch gear.

2. State the factors responsible for arc formation in switch gear.

3. Define fusing current and fusing factor.

4. Classify relays.

5. List the merits and demerits of thermal relay.

6. State the effects of faults on alternator stator and rotor.

7. List the different schemes of protection for Busbars.

8. What are pilot wires? List their effects in transmission lines protection.

9. List the types of surges.

10. List the merits and demerits of neutral grounding.

PART—B

15×4=60

Instructions : (1) Answer *any* **four** questions.

(2) Each question carries **fifteen** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the working of minimum oil circuit breaker.

12. Explain the fuse as protective device.

13. Explain the working of induction type over current relay.

14. Explain differential protection for alternator stator.

15. Explain the working of Buchholz relay.

16. Explain the protection of parallel feeders using time directional relays.

17. Explain the working of any one type of lightning arrestors.

18. *(a)* List the uses of distance relay.

(b) Write short notes on combined protection of transmission lines by definite distance and time distance relays.

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