321 Register No.: [ ]

April 2018

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART - A and PART - B

(2) Answer division (a) or division (b) of each question in PART - C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. What is grid?
2. What is corona?
3. List the tests to be conducted on insulator.
4. What is current chopping?
5. Define static relay.
6. Mention the advantages of DC transmission line.
7. Mention the causes for over voltage in transmission line.
8. Name any two renewable energy sources for power generation.

PART – B

9. What are the factors to be considered while selecting a site for nuclear power plant?
10. What is the necessity for transpositioning the transmission line at regular intervals?
11. Classify the UG cables.
12. What is the function of ELCB? Draw connection diagram.
13. What is the necessity of neutral grounding?
14. Draw typical layout of AC power supply system.
15. Mention the harmful effects of lightning.

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16. Draw typical characteristics of inverse time relay and give a brief account on it.

PART – C

17. (a) Draw the schematic diagram of diesel power plant and explain.

(Or)

(b) Discuss about hybrid solar PV system with simple sketch.

18. (a) An OH line has a span of 120m between level supports. The conductor diameter is 4mm and weight is 0.62kg/m length. The allowable tension is 586kg. Calculate sag, if the wind pressure is 39.2kg/m² of projected area.

(Or)

(b) Draw schematic diagram of HVDC converter station and explain.

19. (a) Explain the causes for failure of insulators.

(Or)

(b) Explain the various methods of laying cable, with simple sketches.

20. (a) Draw the schematic of HRC fuse with tripping device and explain its working.

(Or)

(b) With diagram explain the operation of SF_6 CB.

21. (a) Explain the operation of induction type reverse power relay with diagram.

(Or)

(b) Discuss in detail about resistance and reactance type neutral groundings.
