

April 2025

Time - Three hours
(Maximum Marks: 100)

- (N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (a) or (b) in Part-B. Each question carries 14 marks.)

PART - A

1. Name the conventional methods of power generation.
2. Define diversity factor.
3. Classify overhead transmission lines.
4. Differentiate between monopolar and bipolar DC link.
5. List the advantages of UG cables over overhead transmission lines.
6. State the need for FACTS controllers.
7. List any three properties of SF_6 gas.
8. What are the causes of over voltage?
9. What is static relay?
10. State the problems of ungrounded neutral system.

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PART - B

11. (a) Draw the schematic of thermal power plant. Also explain how electric power is generated from it.
(Or)
(b) Explain about the various types of renewable energy systems.
12. (a) Derive an expression of sag for supports at unequal level with necessary sketches.
(Or)
(b) Define the following:
(i) Maximum Demand (ii) Installed Capacity (iii) Average Load
(iv) Reserve Capacity (v) Base Load (vi) Connected Load (vii) Load Factor.
13. (a) Explain about the laying of UG cables and its types.
(Or)
(b) Discuss about the methods to improve string efficiency of suspension insulator string with necessary diagrams.
14. (a) Explain about the arc extinction methods used in circuit breaker.
(Or)
(b) Discuss about the various types of fuses.
15. (a) Explain the working of current differential relay with necessary diagrams. Also list its applications.
(Or)
(b) Explain about resonant grounding with necessary diagrams.
