

**1728****October 2024**

***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. What are the types of bus bar arrangements?
2. List the advantages of ring main distribution system.
3. What is plugging?
4. Write the advantages of electric drives.
5. Mention the methods of feeding power to locomotives.
6. What is meant by transition in series-parallel control connection?
7. Define luminous intensity.
8. What are the advantages of LED lamps?
9. Give the advantages of electric heating.
10. List out any three electric welding equipment.

[Turn over.....

PART - B

11. (a) Discuss about various sub stations in electrical power systems.

(Or)

(b) Explain the consequences of disconnection of neutral in 3 phase 4 wire AC distribution system with an example.

12. (a) Explain about regenerative braking as applied to various motors.

(Or)

(b) Discuss about the factors governing the selection of motors.

13. (a) Discuss about various current collectors used in electric traction.

(Or)

(b) Explain about the different starting methods of DC traction motors.

14. (a) State and explain the laws of Illumination.

(Or)

(b) Explain about the working of Arc lamp and Halogen lamp with necessary diagrams

15. (a) Explain direct and indirect resistance heating with suitable sketches.

(Or)

(b) Explain about the Vertical Core (AJAX WYATT) induction furnace with a neat sketch.

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