795 Register No.

November 2022

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. Give a brief note on gas insulated substation.
2. What is meant by feeder in distribution system?
3. Mention the advantages of electric braking.
4. Draw the typical speed – time curve.
5. Define average speed.
6. Define illumination.
7. Mention any three advantages of electric heating.
8. Mention the types of arc welding.

PART – B

9. Classify substations based on service requirement.
10. Draw the single line diagram of sectionalised single bus bar system.
11. Give a brief account on parts of electric drive.
12. Define continuous rating and intermittent rating.
13. What is the necessity for using booster transformer in AC traction system?
14. What are the factors to be considered while designing lighting scheme?
15. Write a note on infrared heating.
16. Compare LED, CFL and Incandescent lamps based on lumen output.

[Turn over.....

PART – C

17. (a) Draw and explain double bus bar arrangement.

(Or)

(b) Explain the different equipment used in a substation.

18. (a) Explain the factors governing the selection of motors.

(Or)

(b) Select suitable motors for (i) Paper mill and (ii) Belt conveyors. Justify your choice.

19. (a) (i) Write short notes on bow collector.
(ii) Write short notes on the necessity of booster transformer.

(Or)

(b) Explain the contactor type bridge transition controller.

20. (a) Explain the lighting systems in street lighting and flood lighting.

(Or)

(b) Explain with a sketch the working of high pressure mercury vapour lamp.

21. (a) With a neat sketch explain Ajax-Wyatt vertical core type induction furnace.

(Or)

(b) Explain LASER beam welding with a neat sketch.
