

# EEM52 Distribution and utilisation

786

REG. NO

OCTOBER 2021

Time: Three hours

Maximum Marks: 75

- Note:
1. Answer ALL the questions in PART-A (1 mark each)
  2. Answer any ONE question from each unit in PART-B (3 marks each)
  3. Answer any ONE question from each unit in PART-C (10 marks each)
  4. The question paper contains TWO Pages

## PART-A (1x10=10)

1. Mention the types of distribution system according to type of supply.
2. What do you understand by distribution system?
3. Mention any two parts of electrical drives.
4. Which type of braking has braking energy fed back to supply?
5. Define average speed.
6. Which type of motor is ideally suited for traction?
7. State the unit of illumination.
8. State any two factors to be considered while designing a lighting scheme.
9. What are the requirements of heating element materials?
10. What is defined as seam welding?

## PART-B (3x5=15)

### UNIT-I

11. List any 3 classification of distribution systems?
12. Compare indoor and outdoor substation

### UNIT-II

13. List the various types of enclosures.
14. Write short notes on Dynamic Braking.

### UNIT-III

15. What do you understand by simplified trapezoidal speed-time curve?
16. Write a short notes on catenary and droppers.

### UNIT-IV

17. Define solid angle and candle power. State the units.
18. List the essentials features of good lighting scheme.

### UNIT-V

19. State the different methods of heating.
20. Name the various types of resistance welding.

786

PART-C (10x5=50)

UNIT-I

21. Mention the classification of AC Distribution and explain Primary and secondary distribution system.
22. Draw a neat layout of 11KV/440V substation and explain.

UNIT-II

23. Draw and explain the performance characteristics of DC shunt motor.
24. Explain plugging as applied to DC shunt motor and 3 phase induction motors.

UNIT-III

25. Explain the construction and function of Bow collector and pantograph collector with neat sketch.
26. Explain the different steps involved in shunt transition with neat sketch.

UNIT-IV

27. Explain the principle and construction of incandescent lamp.
28. Explain the principle of operation of sodium vapour lamp with neat sketch

UNIT-V

29. Draw a neat sketch of "Ajax-Wyatt Furnace" and explain its operation.
30. Explain the principle of electron beam welding.

\*\*\*\*\*