

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. State ohm's law.
2. Define magnetic flux density.
3. Define frequency.
4. State any two applications of universal motor.
5. State the types of servomotor.
6. What is electric shock?
7. Define IC voltage regulator.
8. Which gates are called universal gates?
9. What is a limit switch?
10. Expand MCCB.

PART-B (3x5=15)

UNIT-I

11. State kirchoff's laws.
12. State Faradays laws of electromagnetic induction.

UNIT-II

13. Write the relationship between phase and line voltage and current in a star and delta connected network.
14. State the differences between squirrel cage and slip ring induction motor.

UNIT-III

15. State the differences between individual drive and group drive.
16. What are the causes for accidents?

UNIT-IV

17. What is forward biasing in PN junction diode?
18. What is positive and negative logic?

UNIT-V

19. How temperature is measured using thermistor?
20. Write short notes on PLC scanning.

PART-C (10x5=50)

UNIT-I

21. Explain the principle of operation of DC generator.
22. Explain the operation of 4 point starter with a neat diagram.

UNIT-II

23. Explain the principle of operation of a single phase transformer.
24. Explain the principle of operation of single phase capacitor start induction motor.

UNIT-III

25. Explain the construction and working of a stepper motor.
26. Explain variable frequency drive with a neat block diagram.

UNIT-IV

27. Explain the full wave rectifier with neat sketch and wave forms.
28. Draw the symbol and write the truth table and Boolean expression for OR, AND, EX-OR and EX-NOR gates.

UNIT-V

29. Explain the working of an inductive proximity sensor.
30. Explain PLC with a neat block diagram.
