

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. What is Thermistor?
2. Define Torque.
3. List the applications of Manometer.
4. List the types of Strain gauges.
5. Define PLC.
6. List any one advantage of PLC.
7. What is ladder diagram?
8. List the types of Timer.
9. List the types of communication interface.
10. Define SCADA.

PART-B (3x5=15)

UNIT-I

11. Write the principle of Thermocouple.
12. Write short notes on Pendulum Scale.

UNIT-II

13. Describe the working of Optical Torsion meter.
14. Write a short notes on Bourdon guage.

UNIT-III

15. Compare hardwired circuit versus PLC control.
16. Draw the ladder diagram for logic functions OR and EX-OR.

UNIT-IV

17. Define math instructions.
18. Develop a ladder diagram using Timer instruction.

UNIT-V

19. Define Fiber Optic Communication.
20. What is meant by Channel scanning?

UNIT-I

21. Write a brief note on
 - (i) Bimetallic Thermometer
 - (ii) Filled system Thermometer.
22. Explain the working of Equal arm beam balance with neat diagram.

UNIT-II

23. Explain the construction & working of U-Tube Manometer.
24. Explain about Semiconductor type Strain gauge with neat diagram.

UNIT-III

25. Explain about memory and input modules of PLC in detail.
26. Write a brief note on (i) Operator interface (ii) Message display.

UNIT-IV

27. Explain Data handling instruction in detail.
28. Develop a ladder diagram for cylinder sequence operation using Counter.

UNIT-V

29. Explain in detail open system interconnection network model.
30. Draw Distributed SCADA system and explain for any one application.
