ECM54 Programmable Logic control

816

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. List any two available PLC in market.
2. List any two criteria for selection of suitable PLC.
3. Define Sensor.
4. What is the need of surge suppression in output?
5. List the programming devices used in PLC.
6. What is ON Delay Timer?
7. What is the use of field bus?
8. What do you mean by port sockets in network services?
9. Expand DDC.
10. Expand SCADA.

PART-B (3x5=15)

UNIT-I

11. How is memory organized in PLC?
12. Write a note on modular PLC.

UNIT-II

13. What are the functions of input module?
14. Illustrate TTL output module.

UNIT-III

15. Develop AND logic function in PLC using STL method.
16. Where are T_{ON} and T_{OFF} instructions used in PLC.

UNIT-IV

17. Illustrate physical addressing used in PLC.
18. Summarize file transfer protocol in PLC.

UNIT-V

19. Interpret the characteristics of digital data.
20. Explain data acquisition system.

PART-C (10x5=50)

UNIT-I

21. Draw and explain the block diagram of PLC.
22. (i) What is the necessity of expansion module.
    (ii) List the advantages of PLC.

UNIT-II

23. Explain the working of (i) Photo electric sensor (ii) reed switch.
24. Explain discrete output module.

UNIT-III

25. Explain the counter instructions available in PLC.
26. Develop the ladder logic for 4 floor lift system.

UNIT-IV

27. Explain network architecture with neat diagram.
28. Explain LAN Technology.

UNIT-V

29. Explain computer process interface for Data acquisition and control .
30. Explain SCADA Hardware and software.

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