

721

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 any two advantages of PLC.
2. List any two example of input devices used in the PLC input module.
3. What is the process of PLC Scan?
4. What is the function of examine OFF instruction (XIO)?
5. What are the types of timer used in PLC?
6. State the uses of high speed counter.
7. What is router?
8. Expand SMTP.
9. What is control network?
10. List any two manufacturer of SCADA.

PART-B (3x5=15)

UNIT-I

11. What are the jobs of CPU in a PLC?
12. Draw the configuration of sinking input module and sourcing switch.

UNIT-II

13. List the various programming methods of PLC.
14. Draw the ladder diagram of XOR logic (with two input) and explain it.

UNIT-III

15. Write a short note on counter up (CU).
16. List the math instructions.

UNIT-IV

17. List the advantages of bus topology.
18. What is the necessity of file transfer protocol?

UNIT-V

19. Write a short note on control net cable system.
20. Explain the basic IF scripting of SCADA.

721

PART-C (10x5=50)

UNIT-I

21. Explain the fixed and modular PLC hardware.
22. With neat sketch explain the operation of discrete output module.

UNIT-II

23. Explain the PLC scan process.
24. i) Draw the ladder diagram for logic operation AND, OR & NOT.
ii) Explain the following instruction a) Set b) Falling edge.

UNIT-III

25. Explain ON delay timer and OFF delay timer with simple examples.
26. Develop ladder logic program for forward and reverse operation of motor.

UNIT-IV

27. Draw and explain the OSI model of network.
28. Write short note on Subnetting and Supernetting.

UNIT-V

29. Explain the function of devicenet with its interface.
30. Draw the block diagram of SCADA and explain its features & functions with SCADA software.
