October 2018

PART – A

1. What is PLC?

2. List the various I/O modules of PLC.

3. Draw the ladder diagram for AND logic functions.

4. List the types of counters used in PLC.

5. What is TCP/IP?

6. List the various types of processes of an industrial control.

7. What is Ethernet?

8. List the various types of PLCs.

PART – B

9. Compare hardwire control system with PLC.

10. Explain the operation of photo electric sensor.

11. What is a retentive timer?

12. Briefly explain cascading of timers in PLC programming.

13. What is token ring in networking?

14. What are the types of I/O bus networks?

15. What is a data acquisition system?

16. Write a short note on data loggers.

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PART – C

17. (a) Explain the various operating modes of PLC.

    (Or)

    (b) Explain the various input types of PLC.

18. (a) Explain the various types of discrete input modules with neat sketches.

    (Or)

    (b) Explain the types of sensors used in PLC.

19. (a) Explain CTU and CTD instructions with functional blocks and suitable examples.

    (Or)

    (b) Develop ladder logic program for a traffic light control system.

20. (a) Explain in detail about networking with TCP/IP.

    (Or)

    (b) Draw the architecture of an industrial control system showing profibus and explain.

21. (a) Draw the block diagram of direct digital control system and explain.

    (Or)

    (b) Draw the block diagram of SCADA and explain its features and functions with SCADA software.