348

April 2024

Time – Three hours
(Maximum Marks: 100)

[N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.

2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART – A

1. What is the need for TIA?

2. What is motion controller?

3. Define SCADA.

4. What are tags?

5. Write the I/O modules of DCS.

6. Compare DCS and PLC.

7. What is a proprietary protocol?

8. What is HMI?

9. List out the manufacturing systems.

10. List out part feeding devices.

PART – B

11. (a) Explain about TIA architecture.

    (Or)

    (b) Explain about Programmable Automation Controllers(PAC).

12. (a) Explain SCADA system architecture.

    (Or)

    (b) Explain the communication architecture of SCADA.

13. (a) Explain the application of DCS system.

    (Or)

    (b) Discuss the case study on machine/process automation.

14. (a) Explain about industrial field buses.

    (Or)

    (b) Explain how SCADA is interfaced with PLC.

15. (a) Explain about GT and cellular manufacturing.

    (Or)

    (b) Explain the analysis of single station assembly.

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