



C16-AEI-504

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BOARD DIPLOMA EXAMINATION, (C-16)
JANUARY/FEBRUARY—2022
DAEIE - FIFTH SEMESTER EXAMINATION
INDUSTRIAL AUTOMATION

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :**
- (1) Answer **all** questions.
 - (2) Each question carries **three** marks.
 - (3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. State the importance of automation.
2. Draw the diagram of PLC.
3. Draw the ladder diagram of TON.
4. List three rules to follow in drawing ladder diagrams.
5. List three different types of PLC programming techniques.
6. List the three main components of SCADA.
7. Draw the diagram of data logger.
8. Define a Robot.
9. List the applications of CNC system.
10. State the need for communication interfaces.

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PART—B

10×5=50

- Instructions :** (1) Answer **five** questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the PLC based and relay-based control panels.
12. Explain interfacing PLC with PC.
13. Explain counter instructions CTU and CTD ladder diagrams.
14. Explain the ladder diagram for traffic light controller.
15. Explain hardware architectures of SCADA.
16. Explain the block diagram of data acquisition systems.
17. Explain the block diagram of direct digital control systems.
18. Explain the software architecture of embedded systems.

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