



C14-AEI-602

4706

BOARD DIPLOMA EXAMINATION, (C14)
OCT/NOV—2018
DAEIE—SIXTH 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. Define PLC.
2. List the manufacturers of PLC.
3. Draw the ladder diagram for star-delta starter.
4. Draw the diagram showing connection from PLC to output module.
5. Define ladder diagram.
6. List the three specifications of data logger.
7. State the role of computers in process control.
8. List three applications of a robot system.

* 9. Mention different types of tag used in SCADA.

10. List the components of embedded system.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) The answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Compare between relay-based and PLC-based control panels.

12. Explain various modules present in PLC with block diagram.

13. Explain timer instructions of PLC with ladder diagram.

14. (a) Mention the rules to follow in drawing ladder diagram.

(b) Explain the counter instructions of CTU and CTD.

15. Explain the block diagram of direct digital control system.

16. Explain CNC machine and list its applications.

* 17. Explain the software architectures of SCADA.

18. Explain the process of embedded system development
