



C09-AEI-604

3717

BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2017
DAEI—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. List three input devices of PLC.
2. Draw the diagram of PLC output module.
3. Write a short note on PLC based control panel.
4. Draw the diagram of inductive proximity switch.
5. List any three control elements used in automation.
6. Mention any three softwares used in SCADA.
7. List any three important features of SCADA.

- * 8. Draw the block diagram of DDC.
9. List three drawbacks of DDC.
10. Define expert system.

PART—B

10×5=50

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

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

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

11. Explain different parts of PLC.
12. Explain about bit instructions used in PLC programming.
13. (a) Draw and explain the PLC ladder diagram for level controller. 5
(b) Write a short note on 'Associated tags'. 5
14. Explain any two communication standards used in data transfer in PLCs. 5+5
15. Explain the operation of the following : 5+5=10
(a) Fibre optic sensor
(b) Pneumatic switch
16. Explain the interfacing of SCADA with PLC.
17. Explain the architecture of DCS.
- * 18. Explain the classification of robots.
