



C16-AEI-504

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BOARD DIPLOMA EXAMINATION, (C-16)

OCT/NOV—2018

DAEI—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. List any three applications of PLC.
3. List the counter instructions in PLC.
4. Draw the ladder diagram of EX-OR gate.
5. Define ladder diagram.
6. List the three main components of SCADA.
7. List any three applications of CNC machine.

- * 8. State the principle of data logger.
9. State the role of computers in process control.
10. Define the term embedded 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. Draw and explain PLC block diagram.
12. (a) Explain relay-based control panel.
(b) List the types of PLC.
13. Explain the traffic light controller with ladder diagram.
14. Explain the arithmetic instructions of PLC.
15. Explain the interfacing of SCADA with PLC.
16. Explain DDC with block diagram.
17. Explain the operation of robot with block diagram.
- * 18. Explain serial communications using USB.
