C16-AEI–**504**

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BOARD DIPLOMA EXAMINATION, (C-16)

JUNE/JULY—2022

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. Define PLC.

   2. List any three manufacturers of PLC.

   3. Draw the ladder diagram for OR gate.

   4. List the counter instructions of PLC.

   5. Define ladder diagram.

   6. List the three main components of a SCADA.

   7. Define robot.

   8. List any three applications of CNC machine.

   9. List any three applications of data logger.

   10. List the communication interfaces.

PART—B 10×5=50

Instructions : (1) Answer *any* **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. Draw and explain the block diagram of PLC.

12. Explain Interfacing of PLC with PC.

13. Explain counter instructions CTU, CTD with ladder diagrams in PLC.

14. Draw ladder diagram for conveyer belt controller.

15. Explain master station of SCADA.

16. Draw and explain the block diagram of direct digital control system.

17. Draw and explain the block diagram of data acquisition system.

18. Explain the hardware architecture of embedded system.

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