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4706**BOARD DIPLOMA EXAMINATION, (C-14)****JUNE-2019****DAEI-SIXTH SEMESTER EXAMINATION****INDUSTRIAL AUTOMATION**

Time: 3 Hours]

[Max. Marks : 80

PART -A**10X3=30M**

Instructions: 1) Answer **all** the questions. Each question carries **three** marks.

2) Answers should be brief and straight to the point and shall not exceed five simple sentences.

- 1) List any three advantages of PLC.
- 2) Give the concept of replay based control panel.
- 3) List any three instructions of PLC.
- 4) Define Ladder diagram.
- 5) Draw the Ladder diagram of OR gate.
- 6) Define a Robot.
- 7) List three applications of CNC machine.
- 8) Mention any three specifications of a data logger.
- 9) List three main components of a SCADA.
- 10) List three applications of Embedded system.

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PART-B

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5X10=50M

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 answer.

- 11) Explain the block diagram of PLC.
- 12) (a) State the importance of Automation. 4M
(b) List different types of PLCs based on I/O's, memory and configuration. 6M
- 13) Draw the ladder diagram for sequential control of induction motors.
- 14) Explain the arithmetic and comparison instructions with ladder diagrams.
- 15) Draw and explain the data logger system.
- 16) Explain Direct Digital Control system with block diagram.
- 17) Explain communication infrastructure of SCADA.
- 18) Explain hardware architecture of Embedded system.

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