



C16-AEI-504

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BOARD DIPLOMA EXAMINATION, (C-16)

MARCH/APRIL—2021

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. List different types of PLCs based on I/O and memory.
2. List any three applications of PLC.
3. Define ladder diagram.
4. Draw the ladder diagram of DOL starter.
5. Draw the ladder diagram of AND gate.
6. Define SCADA.
7. Draw the diagram of direct digital control system.
8. State the principle of data logger.
9. State the role of computers in process control.
10. Define the term 'Embedded systems'.

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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. Explain relay based control panels.
12. Explain interfacing of PLC with PC.
13. Explain the ladder diagrams of TON, TOFF timers.
14. Explain the ladder diagram of sequential control of induction motors.
15. Explain the creation of graphic symbols using Graphic Display Builder.
16. Explain the operation of a simple Robot with block diagram.
17. Explain CNC machine with block diagram.
18. Explain the hardware architectures of Embedded systems.

A.A.N.M & V.V.R.S.R POLYTECHNIC, GUDLAVALLERU, KRISHNA

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