

**6612**  
**BOARD DIPLOMA EXAMINATION**  
**JUNE- 2019**

\* **DIPLOMA IN APPLIED ELECTRONICS AND INSTRUMENTATION**  
**INDUSTRIAL AUTOMATION**  
**FIFTH SEMESTER EXAMINATION**

**Time: 3 Hours**

**Total Marks: 80**

**PART - A (3m x 10 = 30m)**

*Note 1: Answer all questions and each question carries 3 marks*

*2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences*

1. List three manufacturers of PLC
2. Define Programmable Logic Controller (PLC)
3. Draw the ladder diagram of T OFF timer
4. Define ladder diagram.
5. List three types of PLC programming techniques
6. List the three main components of a SCADA
7. List three applications of a Robot
8. Define a Robot
9. List the applications of CNC machine
10. Define the term Embedded system.

**PART - B (10m x 5 = 50m)**

*Note 1: Answer any five questions and each carries 10 marks*

*2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer*

11. Explain Relay based Control panel
12. Explain the Block diagram of PLC
- \* 13. Draw the ladder diagrams for AND, OR, NOT, NAND and NOR gates
14. (a) Draw the ladder diagram of traffic light controller (7M)  
 (b) Explain the ladder diagram of traffic light controller (3M)
15. Explain the Creation of graphic symbols using Graphic Display builder
16. Explain the block diagram of Direct Digital Control System

17. Explain the block diagram of Data Logger

18. Explain the software architecture of Embedded system

\*

- xxx -

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

\*

\*