

R16

Code No: 137GC

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, March - 2021

PROGRAMMABLE LOGIC CONTROLLERS

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

1. Explain the Architecture of PLC input/output modules. [15]
- 2.a) Explain the significance of Communication interface in a PLC System.
b) State the characteristics of the relay, transistor, and triac types of PLC output modules. [7+8]
3. Explain about the Boolean logic of OR logical operation with a neat ladder diagram. [15]
4. Explain the fundamentals of ladder Diagrams and also list their Uses. [15]
5. Discuss different characteristics of PLC registers. [15]
6. Explain a) Timer functions and b) Counter functions of PLC with their industrial applications. [7+8]
- 7.a) Explain in detail about the Shift register along with the sequence of Signals
b) List and explain the various Data handling functions with suitable examples in PLCs. [7+8]
8. Write short notes on the following:
a) Multi bit data processing
b) Analog Signal Processing. [8+7]

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