

Register No.:

365

April 2024

*Time - Three hours
(Maximum Marks: 100)*

- [N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART - A

1. What are the applications of PLC?
2. Write short notes on Scan cycle.
3. Write the steps involved in general PLC programming procedure.
4. List any four bit instructions used in PLC.
5. Draw the ladder diagram for any two comparison functions used in PLC.
6. Define PID function.
7. How to configure analog signals in PLC?
8. Write short notes on Servo drive control.
9. What are the configuration methods of HMI?
10. What is data logging?

[Turn over.....

PART – B

11. (a) Draw the Architecture of PLC and explain each block.
(Or)
(b) Explain in detail PLC communication with PC and software.
12. (a) Explain in detail PLC programming methodologies.
(Or)
(b) Explain the logic functions used in PLC and draw the symbols used in ladder logic diagram.
13. (a) Explain the various types of arithmetic functions used in PLC and draw the symbols used in ladder logic diagram.
(Or)
(b) Explain in detail any four program control functions used in PLC.
14. (a) Explain about analog inputs and analog outputs used in PLC.
(Or)
(b) Explain in detail the stepper motor system with PLC programming.
15. (a) Explain the need for HMI in industry automation, types of HMI and configuration of HMI.
(Or)
(b) Write short notes on Tags, planning graphic design, navigation, Linking objects with tags.
