

Register No.:

2203

October 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. List out the relays used in control circuit.
2. What is electronic timer?
3. What do you mean by jogging control?
4. What is meant by two speed controller of cage induction motor?
5. What is planner machine control?
6. What is the necessity of providing power limit switches in overhead cranes?
7. Write any three advantages of automation.
8. List the various types of PLCs.
9. What is OFF delay timer?
10. Write the features of SCADA software.

[Turn over.....

PART – B

11. (a) Explain the construction and operation of limit switch and pressure switch with a neat diagram.

(Or)

- (b) Write short notes on (i) interlocking of drives (7)
(ii) Remote control operation of drives (7)

12. (a) Explain the operation of three step rotor resistance starter for wound induction motor.

(Or)

- (b) With neat sketch, explain the principle of field failure protection circuit for DC motor.

13. (a) Explain the schematic arrangement and control circuit of battery operated truck.

(Or)

- (b) Write the general procedure for troubleshooting in industrial control circuits.

14. (a) Explain the modes of operation of PLC.

(Or)

- (b) (i) Compare hardwire control system and PLC system. (7)
(ii) What are the criteria for the selection of suitable PLC? (7)

15. (a) Explain the ladder logic implementation for DOL starter and draw the hardware circuit.

(Or)

- (b) Explain the various relay type instructions used in PLC.
