

484

Register No.:

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. List the advantages of automation.
2. Write short notes on PLC scan.
3. What are the five main sections of an AC input module?
4. What is the necessity of relay output module?
5. Why do we need timer instructions?
6. List any three parameters associated with counter instruction.
7. What is the function of transport layer in OSI model?
8. Write about the File Transfer Protocol.
9. What are the use of modems in SCADA?
10. What are Data loggers?

[Turn over.....

PART - B

11. (a) Draw and explain the block diagram of PLC.

(Or)

(b) Explain the types and applications of PLC.

12. (a) Explain the working of limit switch and reed switch with neat sketches.

(Or)

(b) With neat sketch explain the operation of TRIAC type output module.

13. (a) What is a CTU instruction? Explain its working with the help of suitable ladder diagram and timing diagram.

(Or)

(b) Develop ladder logic for EB to Generator change over. Also explain the sequence of its operation.

14. (a) Explain the different types of network topologies.

(Or)

(b) Explain Field Bus protocol.

15. (a) Draw the structure of control system. Explain about the components of process control system.

(Or)

(b) Explain the functions of SCADA with block diagram.

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