

997

October 2016

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Answer any fifteen questions in PART – A and division (A) or division (B) of each question in PART – B.

(2) Each question carries 1 (one) mark in PART – A and 12 (twelve) marks in PART – B.]

PART – A

1. Write any two selection criteria of PLC.
2. Name the parts of PLC.
3. State the different types of PLC.
4. State the use of PLC.
5. Write any three different types of sensors.
6. Define sourcing.
7. Name the two surge suppression circuit.
8. Write any three output field devices.
9. Write any two programming methods of PLC.
10. What is a relay?
11. Name any two data manipulating instructions.
12. What is an on-delay timer?
13. What are the services offered by the networking?
14. What are the five layers of TCP/IP protocol?
15. What is sub-netting?
16. Expand MAN.
17. Expand DDC.
18. Give any two SCADA softwares.
19. What is the purpose of alarm?
20. State any two advantages of DAS.

[Turn over.....

PART - B

21. (A) Draw the block diagram of a PLC and explain each block.
(Or)
(B) Briefly explain memory used in PLC.
22. (A) Draw the discrete input module and explain the operation.
(Or)
(B) Explain: (i) Inductive proximity sensor (ii) Photo electric sensor.
23. (A) Explain ON delay timer with ladder diagram.
(Or)
(B) Develop relay logic diagram of star delta starter and convert it into logic diagram.
24. (A) Explain the TCP/IP basics with a sketch.
(Or)
(B) Explain the need of a field bus with example.
25. (A) Discuss in detail about SCADA software.
(Or)
(B) Explain DAS with block diagram.
