Register No.:

328

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 different types of cylinders.
2. What is the purpose of Pressure relief valve?
3. List the types of seal configurations.
4. Define force multiplication.
5. List any three differences between the Hydraulic and Pneumatic system.
6. What are the uses of servo valves?
7. Draw the PLC scan cycle.
8. List the criteria for selection of PLC.
9. Write a note on printed report.
10. Draw the ladder diagram for compressor control.

[Turn over.....

PART – B

11. (a) Describe the working principle of Gear motor with a neat sketch.

(Or)

(b) Explain the working principle of different type of flow divider.

12. (a) (i) Description the construction and working of spring loaded accumulator.
(ii) Explain the working of water cooled heat exchanger.

(Or)

(b) Explain about counter balance circuit with a neat sketch.

13. (a) Explain the working principle of FRL unit with a neat sketch.

(Or)

(b) (i) Explain the construction and working of Solenoid valve with neat diagram. (8)
(ii) Explain the construction and working of Rotary screw compressor. (6)

14. (a) Explain the block diagram of PLC with a neat sketch.

(Or)

(b) Explain the sinking and sourcing I/O module in PLC system.

15. (a) Explain the ladder diagram for the logic of AND, OR, EXOR and NAND with a neat diagram.

(Or)

(b) Discuss about the control circuit and ladder diagram for Star-Delta starter with a neat diagram.
