

Register No.:

**362**

**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. Write the types of electric drive.
2. Define step angle.
3. Draw the block diagram of hydraulic system.
4. What is pneumatic system?
5. Define pump.
6. What is air compressor?
7. Sketch the block diagram of DCS.
8. What is operator interface?
9. List the classifications of robot.
10. Write about tactile sensor.

[Turn over.....

**PART – B**

11. (a) Discuss the working principle of variable reluctance stepper motor with neat diagram. Also list its applications.  
(Or)  
(b) Explain about eddy current drive for speed control of induction motor.
12. (a) Discuss the elements of hydraulic system with neat diagram.  
(Or)  
(b) Explain the various types of DCV with necessary diagrams.
13. (a) Explain the classifications of hydraulic pumps.  
(Or)  
(b) Explain diaphragm compressor with neat diagram.
14. (a) Discuss the functional elements of DCS with neat diagram.  
(Or)  
(b) Explain the architecture of anyone commercial DCS.
15. (a) Explain proximity sensor with neat diagram.  
(Or)  
(b) Describe about a automated guided vehicle system.

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