

Register No.:

892

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. Define NC machines.
2. Write the machining axes conventions for turning centre.
3. Write about friction slide ways.
4. Write about encoder.
5. Write about datum points.
6. What is meant by circular interpolations?
7. List out the benefits of FMS.
8. Write about end effectors.
9. What is industry 4.0?
10. What are the objectives of maintenance?

[Turn over.....

PART – B

11. (a) (i) Explain the Working of CNC System with diagram. (10)
(ii) List the Differences between NC and CNC. (4)
(Or)
(b) Explain the construction and working principle of Coordinate Measuring Machines with neat sketch.
12. (a) (i) Explain the Stepper Motor with neat sketch. (7)
(ii) Explain linear motion bearing with neat sketch. (7)
(Or)
(b) (i) Explain linear and rotary transducers. (7)
(ii) Explain hydraulic System with diagram. (7)
13. (a) (i) Explain the types of motion control with diagram. (7)
(ii) Explain the stock removal turning. (7)
(Or)
(b) Explain the part program using canned cycles for the thread cutting operation.
14. (a) Explain the working of AGV with neat sketches and benefits.
(Or)
(b) Discuss about the robot programming methods with suitable programs.
15. (a) Explain about (i) Machine Learning (ii) Artificial intelligence.
(Or)
(b) Explain about (i) servomotor bearing (ii) Servo system maintenance.
