

Register No.:

**541**

**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. Expand APT.
2. Write short notes on macros.
3. List out various types of CAD system.
4. List the advantages of FEM.
5. Write down the benefits of CAM.
6. Write down the application of rapid prototyping.
7. List out various components of NC system.
8. State any two requirements of good slide ways.
9. Mention the benefits of AGV.
10. Classify industrial robots.

[Turn over.....

PART – B

11. (a) Explain about motion control system in NC/CNC machine.  
(Or)  
(b) Explain the part program using canned cycles for the thread cutting operation.
12. (a) Explain about Shigley's design process.  
(Or)  
(b) Explain surface modeling and solid modeling.
13. (a) Explain MICLASS coding system.  
(Or)  
(b) Explain about 3D Printing.
14. (a) Explain about CNC system.  
(Or)  
(b) What is CMM? Explain the working of CMM with a neat sketch.
15. (a) What is FMS? Explain its components.  
(Or)  
(b) What is AGV? Explain their types.

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