

4760

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DME - SIXTH SEMESTER EXAMINATION

COMPUTER-AIDED MANUFACTURING

Time : 3 hours ]

[ Total Marks : 80

**PART—A**

4×5=20

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **four** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define computer integrated production system.
2. Write the inputs of material requirement planning (MRP-I).
3. Write any five advantages of DNC.
4. Write three differences between CNC and DNC.
5. List different types of slide ways used in CNC machines.
6. Define part programming. Mention its types.
7. What is a miscellaneous function? Give two examples.
8. Write the objectives of CIMS.
9. What are the main components of CMM?
10. List out types of manipulators in robots.

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**PART—B**

15×4=60

- Instructions :** (1) Answer *any four* questions.  
(2) Each question carries **fifteen** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the features of MRP-I and MRP-II with block diagrams.
12. Define CAM. Explain various functions and benefits of CAM.
13. Explain briefly with neat sketch the features of CNC machining centre.
14. Explain briefly about (a) encoders and (b) working of tool magazine.
15. Write a CNC manual program for executing a 'step turning' operation on a mild steel rod to reduce the diameter from 42 mm to 30 mm for a length of 54 mm on a CNC lathe.
16. Explain the types of statements used in APT programming in detail.
17. Explain the functions of components of FMS with a neat sketch.
18. Explain the basic components of robot with a neat sketch.

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