



C14-M-604

4760

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2017

DME—SIXTH SEMESTER EXAMINATION

COMPUTER-AIDED MANUFACTURING

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

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

1. Define CAM. List two benefits of CAM. 1+2=3
2. Write the inputs of material requirement planning (MRP-I). 3
3. List out six advantages of CNC. 3
4. Write three differences between CNC and DNC. 3
5. List different types of slideways used in CNC machines. 3
6. Define part programming. Mention its types. 1+2=3
7. What is a miscellaneous function? Give two examples. 1+2=3

8. List three objectives of CIMS. 3
9. Write the limitations of FMS. 3
10. What is a robot? State two advantages of robots. 1+2=3

PART—B

10×5=50

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

11. (a) Explain six functions of CAM. 6
 (b) State any four advantages of a computer-integrated production system. 4
12. Explain the features of MRP-I and MRP-II with block diagrams. 5+5
13. (a) Explain briefly with neat sketch the features of CNC machining centre. 3+3
 (b) Explain briefly about automatic tool change. 4
14. Explain in detail the manufacturing methodology of NC system. 10
15. Explain briefly (a) linear interpolation and (b) circular interpolation. Give two examples for each. 4+4+1+1
16. 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. 10
17. Explain the functions of components of FMS with a neat sketch. 5+5
18. What are the end effectors? Explain them with neat sketches. 2+8
