



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

/4760

1

[ *Contd...*

[WWW.MANARESULTS.CO.IN](http://WWW.MANARESULTS.CO.IN)

8. List three <sup>\*</sup> 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

\*\*\*