



C09-M-604

3782

BOARD DIPLOMA EXAMINATION, (C-09)

OCT/NOV—2014

DME—SIXTH SEMESTER EXAMINATION

CAD/CAM

Time : 3 hours]

[*Total Marks* : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

1. List out the stages of a CAD process.
2. Define CAM and give any two functions.
3. Write any three types of communication network used in CAD/CAM system.
4. Write any three comparisons of NC and CNC systems.
5. What is a machining centre?
6. Write the block diagram of DNC system with basic components.
7. Define 'interpolation' and give two examples.

- * 8. Name the statements in APT programming.
9. Define flexible manufacturing system (FMS).
10. Write the applications of CMMs.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

11. (a) What is a computer-integrated production system?
(b) What are the features and advantages of a computer-integrated production system?
12. Explain MRP-I and MRP-II by using suitable block diagram.
13. (a) Explain, in detail, the basic components of NC system with a neat sketch.
(b) State the advantages of NC system over conventional system.
14. (a) Explain the construction and working of recirculatory ball screw with a neat sketch.
(b) Describe the working principle of automatic tool changer (ATC).
15. Write on (a) canned cycle, and (b) mirror image.
16. Write a CNC manual part program for executing a 'step turning' operation to reduce a 30 mm diameter MS rod into 25 mm diameter for a length of 40 mm on a CNC lathe.
- * 17. Describe, in detail, the functions of a CIM system.
18. With a neat sketch, describe the working principle of a robot.
