* 3 7 8 2 *

C09–M–**604**

3782

BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2015

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.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List out any three output devices used in CAD system.

2. State different networks used in CAD system.

3. Give any three reasons for integration of CAD and CAM.

4. Write down different types of CNC turning centres.

5. Mention any three functions of CNC machine.

6. Write down any three advantages of NC machines over conventional machines.

7. Write down the tasks performed by preparatory functions.

8. Write the general format of auxiliary statement used in APT language. Give an example to it.

9. Define FMS.

10. List out the salient features of CNC CMM.

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. What do you understand by CAD? Discuss reasons for implement CAD in industry.

12. Explain the features, functions and application of material requirements planning (MRP-I).

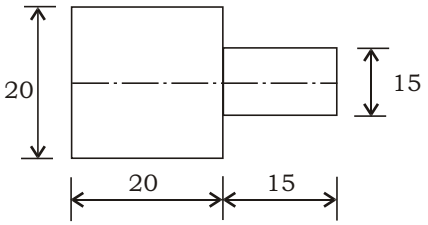
13. *(a)* What are the feedback devices generally used in CNC machines?

(b) Explain their working in brief.

14. *(a)* Differentiate between DNC and CNC systems.

(b) Explain the machine control unit in NC machine tool.

15. Write a part program for the following job (all dimensions are in mm) from a shaft 25 mm diameter and 38 mm length to make a stepped shaft with the dimensions as shown in the figure given below. Take speed = 3000 r.p.m. and feed = 30 mm/min. Assume all other data.



16. Explain the following terms in the context of CAM :

(a) Tool nose radius compensation

(b) Circular interpolation

(c) Subroutines

(d) Mirror image

17. Explain with the aid of a block diagram, the 'concept of CIMS'.

18. Explain the working of robot manipulator.

★ ★ ★