* 3 7 8 2 *

C09–M–**604**

3782

BOARD DIPLOMA EXAMINATION, (C–09)

APRIL/MAY—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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Write the names of graphic input, output and display devices used in CAD system.

2. Define MATERIAL REQUIREMENT PLANNING (MRP–I).

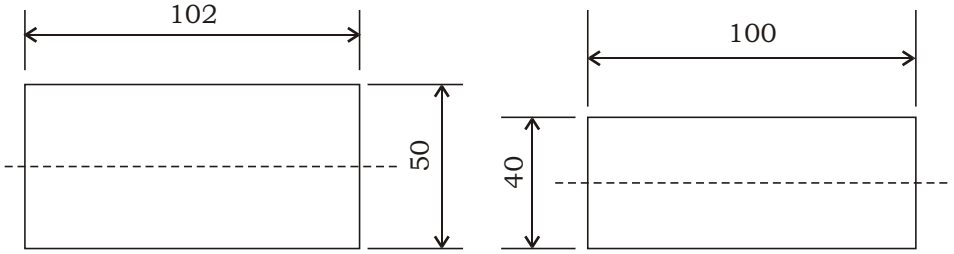
3. List out the components required to form a network in CAD system.

4. What is the difference between incremental encoder and absolute encoder?

5. State the applications of CNC machines.

6. Write down the specifications of a vertical CNC machining centre.

7. Write a part program to perform the job shown in the following figure :



[Take depth of cut as 2 mm, speed as 1000 r.p.m. Tool code as 03, and feed as 160 mm/min.]

8. Differentiate between linear interpolation and circular interpolation.

9. Mention any three limitations of CIMS.

10. State the limitations 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 is CAM? Explain its importance in the present-day manufacturing industry.

12. *(a)* Explain the architecture of a typical CAD workstation.

(b) What are the merits and demerits of CAD? Explain in detail.

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

(b) Discuss the main constructional features of NC machines.

14. Discuss data processing unit and control loops unit of an NC system.

15. *(a)* What is meant by manual part programming? What are the disadvantages of it?

(b) Discuss the importance of motion statement in APT.

16. *(a)* What are miscellaneous functions?

(b) Write the main G and M codes used in manual part programming.

17. List out the advantages and disadvantages of FMS. What is the necessity of FMS?

18. Explain with neat sketches, the function of each component of a robot.

★ ★ ★