



C14-M-604

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BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2018
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.
2. Write the benefits of CAM.
3. Define computer numerical control system.
4. What is machining centre? List out the types of machining center.
5. What is an automatic tool changer (ATC)?
6. Define programming. Mention its types.
7. What is a miscellaneous function? Give two examples.

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[*Contd...*

8. What are the objectives of CIMS?
9. What are the advantages of 'CNC CMM'?
10. Write any six industrial applications of ROBOT.

PART—B

10×5=50

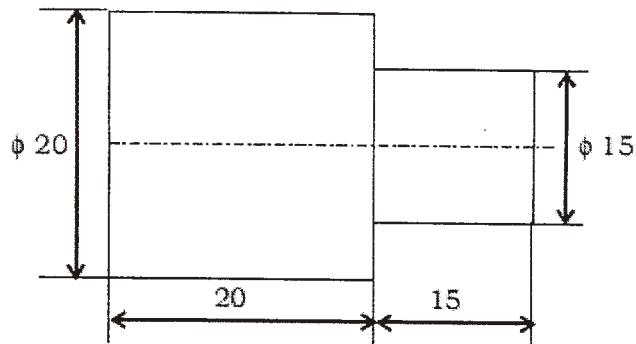
Instructions : (1) Answer *any five* questions.

(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) What is a computer integrated production system?
(b) What are the features and advantages of a computer integrated production system?
12. Explain about MRP-I by using suitable block diagram. Write any four benefits of MRP-I.
13. Explain in detail about the basic components of an NC system with a neat sketch.
14. (a) What are the types of slide way used in CNC machines?
(b) Explain in detail about any two types of slide way used in CNC machines.
15. (a) Explain the steps involved in NC/CNC part programming.
(b) What are the types of statement used in APT programming? Explain in detail.

16. Write the part program for a 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 below. (Take speed 1000 RPM and feed 50 mm/min and maximum depth of cut allowed is 2 mm :



17. Draw the layout showing the components of FMS. Explain the functions of each component of FMS layout.
18. Draw a neat sketch of industrial ROBOT, label its parts and explain the functions of each part of the ROBOT.
