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BOARD DIPLOMA EXAMINATION, (C–14)

OCT/NOV—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. What are the benefits of MRP-II?

2. Write any three advantages of CIPS.

3. Draw the layout of CNC system.

4. List any three advantages of recirculating ball screw.

5. What is word address format? Give an example.

6. List various steps involved in manufacturing on NC system.

7. What are the M-codes for the following?

(a) Spindle start counter clockwise

(b) Program stop

(c) Coolant off

8. List any three objectives of CIMS.

9. Define scanning and digitising.

10. Define 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. Explain MRP-II with a suitable block diagram.

12. *(a)* What is a computer integrated production system?

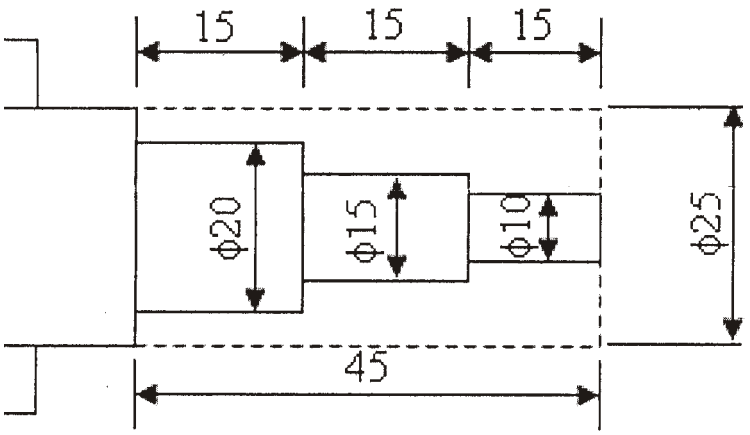
(b) What are the features and advantages of a computer integrated production system?

13. Draw the neat sketch and explain the basic components of NC system.

14. Explain DNC system with a neat sketch.

15. Explain various steps involved in CNC part programming.

16. Write a part program for the component shown in the figure given below :



Working Materials : Mild steel, work size : 30 mm dia, Length : 50 mm dia, cutting speed = 600 r.p.m., feed = 150 mm/min, depth of cut should not exceed 2 mm.

17. Draw the FMS layout and explain the function of each component of FMS.

18. What is an end effector? Explain about any two types of end effector.

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