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C09–M–**604**

3782

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2018

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. State the different networks used in CAD system.

2. Write down any three differences between manual design and computer-aided design.

3. List out the different types of CAD system.

4. Draw the block diagram of NC system.

5. State the function of tape reader in NC system.

6. Write down the functions of control unit in CNC machines.

7. Write down the M codes for the following :

(a) Program stop

(b) Spindle start

(c) Coolant on

8. List out any six post-processor statements used in APT language.

9. List out the components of FMS.

10. List out advantages 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. Discuss the data requirements of material requirement planning system (MRP–I).

12. Explain the concept of integrated CAD/CAM organization.

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

(b) Explain their working in brief.

14. *(a)* Differentiate between a turning centre and machining centre.

(b) What are the requirements of spindle drives?

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

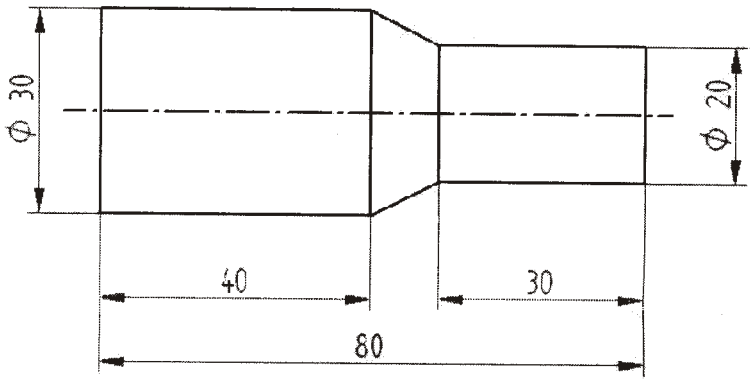
(a) Tool nose radius compensation

(b) Circular interpolation

(c) Subroutines

(d) Mirror image

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



Work material : mild steel

Work size : 32 mm dia

Length : 90 mm

Speed : 800 r.p.m.

Feed : 200 mm/min

Depth of cut : 2 mm

Assume other data.

17. Explain the features and the advantages of CIMS.

18. Explain the basic components of a robot.

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