



C09-M-604

3782

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2021

DME - SIXTH SEMESTER EXAMINATION

CAD / CAM

Time : 3 hours ]

[ Total Marks : 80

**PART—A**

4×5=20

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

(2) Each question carries **four** marks.

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

1. State three networks used in CAD system.
2. List out the limitations of CAM system.
3. List out three types of CAD system.
4. What are the drawbacks of NC machines?
5. State the function of tape reader in NC system.
6. Give major specifications of a CNC machine.
7. Write down the M codes for the following :
  - (a) Program stop
  - (b) Spindle start

8. State the purpose of post-processing in computer-assisted part programming.
9. List out the components of FMS.
10. List out the benefits of FMS.

**PART—B**

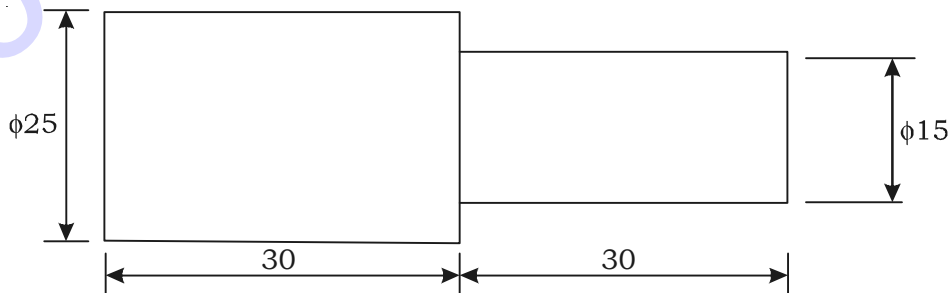
15×4=60

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

(2) Each question carries **fifteen** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain in detail the stages involved in the design of a component using CAD.
12. List and explain any two types of computer communication networks used in CAD.
13. Draw the block diagram of CNC system and explain the function of each component.
14. Distinguish between NC, DNC and CNC.
15. Write a part programme for the component shown in the figure. All dimensions are in mm. Machining parameters are spindle speed : 800 r.p.m.; feed : 100 mm/min maximum; depth of cut : 3 mm; size of raw material is 26 mm diameter and 60 mm length.



- 16.** Write short notes on :
- (a) Subroutines
  - (b) Canned cycles
- 17.** Explain the construction and working of a CNC-CMM with a neat sketch.
- 18.** Explain briefly any two end effectors of robots with neat sketches.

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