



C16-M/RAC-505

6641

BOARD DIPLOMA EXAMINATION, (C-16)

NOVEMBER—2020

DME—FIFTH SEMESTER EXAMINATION

COMPUTER AIDED MANUFACTURING SYSTEMS

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.

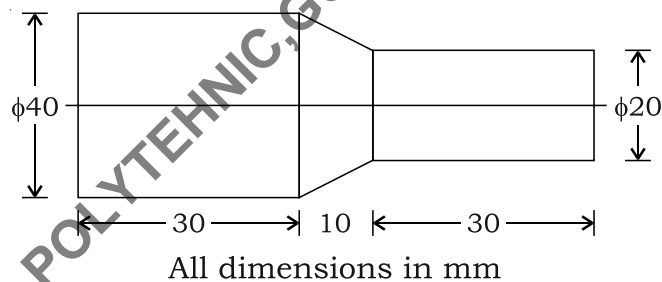
1. State the advantages of group technology.
2. State three applications of NC system.
3. Draw the line diagram of a CNC system.
4. Illustrate open and closed loop control systems.
5. State the requirements of guide ways in CNC machine tools.
6. Define manual part programming.
7. Write the syntax of G00, G91, G01.
8. Define a robot.
9. Define flexible manufacturing system (FMS).
10. What is lean manufacturing?

PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

- 11.** Describe the functions and benefits of CAD and CAM in CAD/CAM system. 5+5
- 12.** Illustrate NC system and describe its advantages over conventional manufacturing system. 6+4
- 13.** Describe a CNC-CMM with a neat sketch. 5+5
- 14.** Write short notes on (a) rotary encoders (b) automatic tool changer (ATC). 5+5
- 15.** Write a part program in G and M codes for machining the component shown in the figure below : 10



Take cutting speed = 800 r.p.m.

Feed = 200 mm/min

Depth of cut = 2 mm

- 16.** Describe the applications of Robots and AGVS in manufacturing. 5+5
- 17.** Describe out the features, advantages and applications of FMS. 4+3+3
- 18.** Explain the necessity and benefits of CIMS. 5+5
