

1779**Code : 15ME62T**Register
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VI Semester Diploma Examination, April/May-2018**COMPUTER INTEGRATED MANUFACTURING****Time : 3 Hours]****[Max. Marks : 100**

- Note :** (i) Answer any **six** questions from Part – A.
(ii) Answer any **seven** questions from Part – B.

BETA CONSOLE!**PART – A****6 × 5 = 30**

1. List any five benefits of Automation.

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2. State the benefits of CIM.

**5**

3. Define DNC and sketch the General configuration of DNC

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4. Explain Direct and Indirect Tool Monitoring System.

**5**

5. Explain the methods of Dimensioning System.

5

6. Define (i) Machine Zero, (ii) Work Zero, (iii) Tool home position.

5

7. List the applications of Group Technology.

5

8. Explain OPTIZ coding system.

5

9. List the different types of End Effectors used in Robots.

5

PART - B

7 × 10 = 70

10. (a) Explain about the five levels of Automation. 5
 (b) Explain the basic elements of an Automated system. 5
11. Sketch and explain Point to Point and Straight Cut NC motion control system. 10
12. (a) List the requirements of Feed drives. 5
 (b) Explain with a neat sketch Flat and Dovetail Guide ways. 5
13. (a) Explain Static load and Dynamic load. 5
 (b) Explain Thermal load and mention the sources of thermal load. 5
14. Sketch and explain (i) Hydrodynamic bearing, (ii) Hydrostatic bearing. 10
15. (a) Explain with block diagram Word addressed format. 7
 (b) Explain Tool Length Compensation. 3
16. Write a Part Program for Box Step Turning operation for the given component as shown in the figure 1 using G90. Code. 10

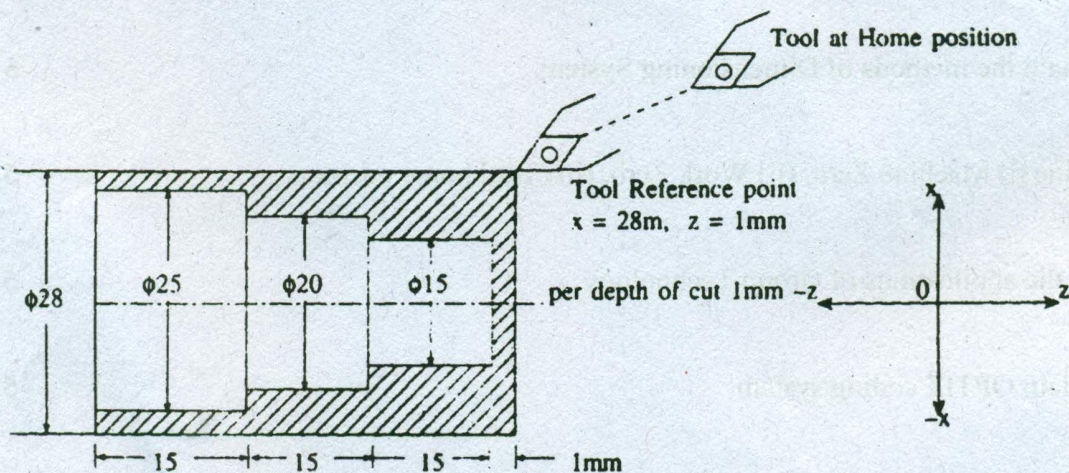
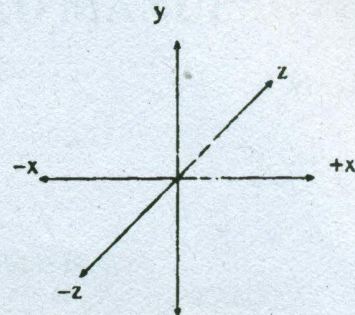
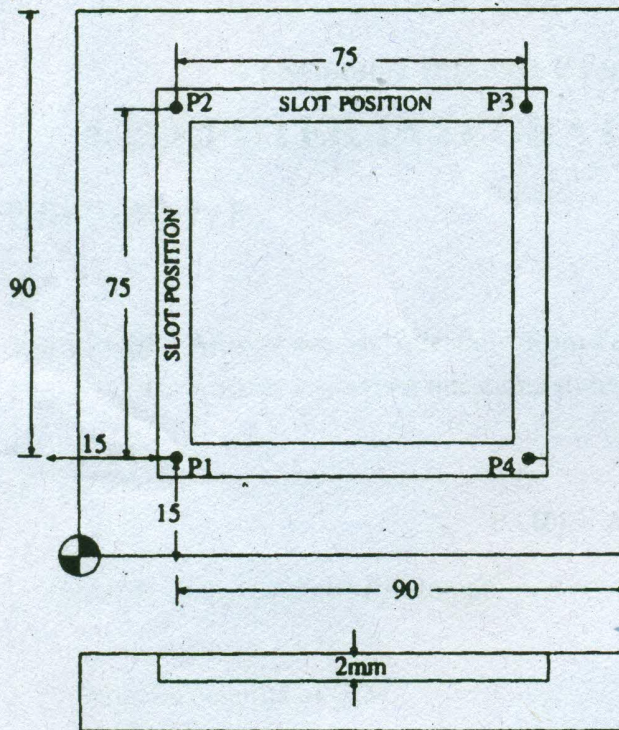


Figure - 1

17. Construct a Part Program for the following component shown in Figure – 2.

10



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Figure - 2

18. Explain : (i) Retrieval type Computer aided process planning.
(ii) Generative type Computer aided process planning.

10

19. (a) Sketch and explain Rectangular coordinate Robot.
(b) Make use of sketch explain six degrees of freedom in Robot arm.

5

5