1522

Code : 15ME62T

Register Number | | | | | | | | | | |

VI Semester Diploma Examination, April/May-2019

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.
(iii) All Dimensions are in mm only.

PART – A

1. Define automation and mention its needs. 5
2. List ten strategies of Automation and Production system. 5
3. List advantages and disadvantages of NC system. 5
4. Explain Direct and Indirect Tool Monitoring System. 5
5. Explain Absolute and Incremental Dimensioning system. 5
6. Explain Circular Interpolation function. 5
7. List the benefits of Group Technology. 5
8. Define FMS and list the major elements of FMS. 5
9. Explain Walk through method of Robot programming. 5

PART – B

10. (a) Explain about the main elements of CIM system. 7
    (b) Mention the levels of automation. 3

11. (a) Sketch and explain basic components of NC System 7
    (b) Mention the types of NC motion control system. 3

12. (a) List the factors considered in the design of guide ways. 5
    (b) Explain with a neat sketch Vee and Flat guide ways. 5

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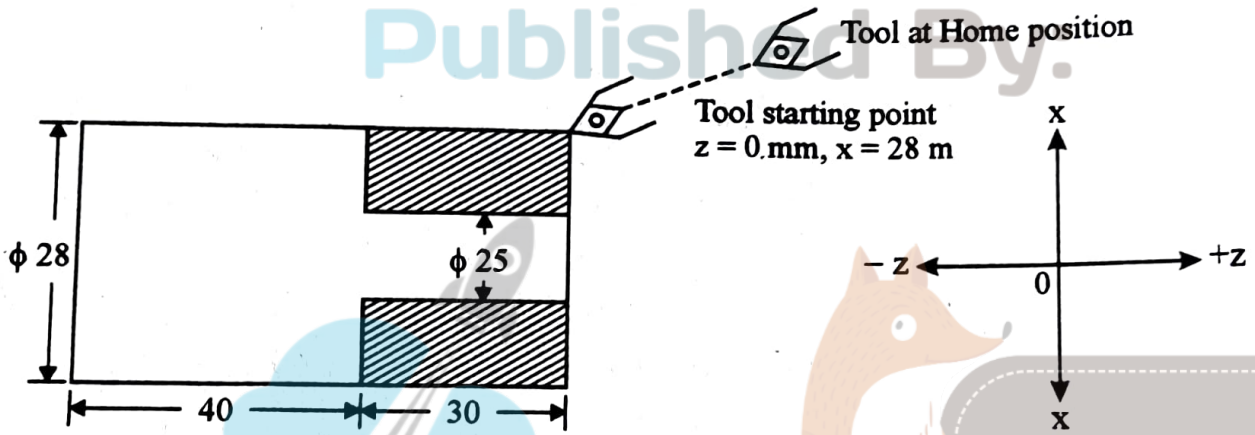
13. (a) List the requirements of Feed drives. 5
    (b) Explain Gauging in CNC Machines. 5

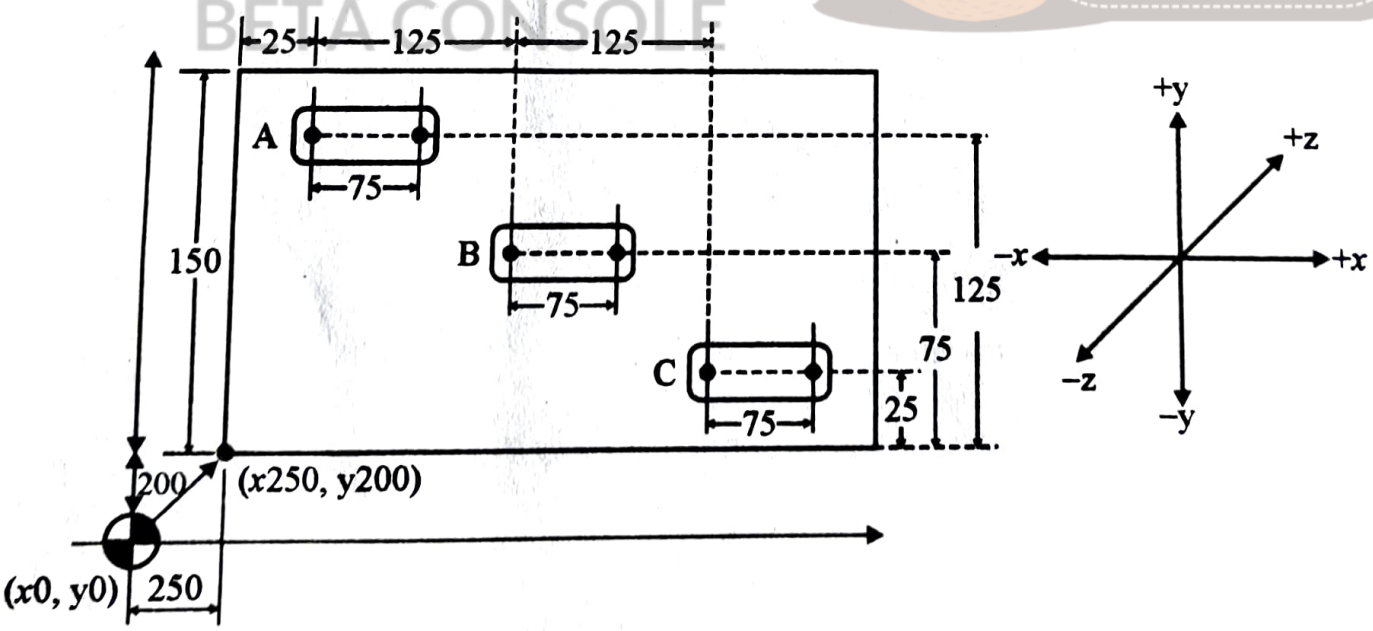
14. (a) Sketch and explain Timing belts. 5
    (b) Sketch and explain Hydrodynamic bearing. 5

15. (a) Explain Axis and Motion Nomenclature in CNC system. 5
    (b) Explain Word addressed format. 5

16. Construct a Part Program for the following component shown in figure. 10



17. Develop a Part Program using subroutine to mill the slots as shown in figure using absolute mode. 10



(a)	Explain OPTIZ coding system used in group technology.	5
(b)	Explain Retrieval type Computer aided process planning.	5
(a)	Sketch and explain SCARA Robot.	5
(b)	Sketch and explain six degrees of freedom in robot arm.	5

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