C16-**M/RAC-505**

6641

BOARD DIPLOMA EXAMINATIONS

OCT/NOV-2019

DME – FIFTH SEMESTER

COMPUTER AIDED MANUFACTURING SYSTEMS

Time: 3 hours Max. Marks: 80

PART – A **3 X 10 = 30**

Instructions: *1. Answer **all** questions.*
*2. Each question carries **Three** Marks.*
3. Answer should be brief and straight to the point and should not exceed Five simple sentences.

1. State three benefits of CAM.
2. List out three advantages of NC over traditional manufacturing.
3. List out three applications of DNC.
4. State the requirements of feed drives in CNC machines.
5. State the applications of cemented carbide tool in CNC machines.
6. Define Computer Aided Part Programming.
7. Write the syntax of G01, G33, and G90.
8. Define a Robot.
9. What are the advantages of FMS?
10. State three advantages of Lean Manufacturing?

[Cont..,

PART – B **5 X 10 = 50**

***Instructions**:* *1. Answer any **Five** questions*
*2. Each question carries **TEN** Marks.*
3. Answer should be comprehensive and a criterion for valuation is the content but not the length of the answer.

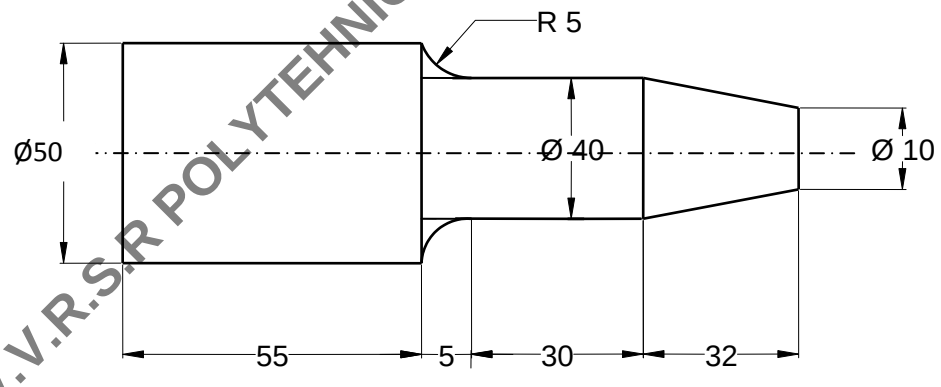
11. Define Group Technology. Explain its advantages and Limitations.

12. Explain with illustrations the PTP (point to point), 1- axis, 2- axis and 3-axis numerical control modes.

13. With the aid of neat sketch, explain the working of CNC – CMM.

14. With the help of a neat sketch, explain the working of an Automatic Tool Changer (ATC).

15. Write a CNC program for the component given below using G and M-codes. Take cutting speed = 600 rpm. Feed = 150 mm/min. Depth of cut = 2 mm (max).



16. What is an AGVS, state its application in Computer Aided Manufacturing.

17. Explain the various types of flexibilities defined under FMS.

18. Illustrate CIMS, and explain its three modules.