6641

C16–M/RAC–505

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BOARD DIPLOMA EXAMINATION, (C-16)
OCT/NOV—2018
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 benefits of CAM.

2. State the advantages of NC manufacturing sysytems.

3. Define i) CNC ii) DNC

4. What is spindle drive? What are the types of spindle drives?

5. State the difference between Incremental encoder and Absolute encoder.

6. Define CAPP.

7. State the word address format of CNC programming as per ISO.

8. List out the types of Robots.

9. Name various flexibilities defined under FMS.

10. List out the benefits of Lean manufactureing.

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PART–B

10×5=50

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

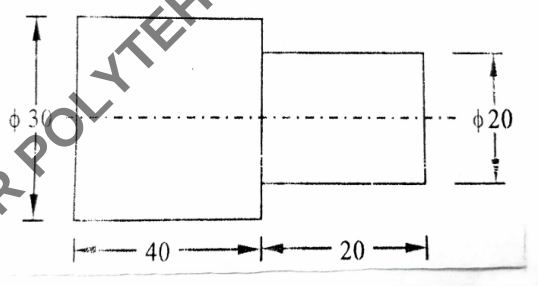
11. What is group technology? Explain its advantages and limitations.

12. Explain the manufacturing methodology of NC system, with a block diagram.

13. Explain the working of CNC - CMM, with a neat sketch.

14. Explain the working of re-circulating ball screw and nut arrangement used in CNC hardware.

15. Write a CNC part program in G and M codes for the component of shown in figure. The machining parameters are : Cutting speed = 600 rpm, Feed = 150 mm/min, Depth of cut should not exceed 2 mm.



16. What are the types of AGVS? Describe them with illustrations.

17. What are the components of FMS? Explain them with illustrations.

18. Define CIMS. Explain the necessity of CIMS in manufacturing industry.

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