C16-M-RAC–**505**

6641

BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

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 functions of CAM.

2. Classify the modes of NC manufacturing systems.

3. State the advantages of CNC system over NC system.

4. What is a tool magazine? Name the types of tool magazines.

5. Define slideway. What are the types of slideways?

6. Differentiate between manual part programming and computer aided part programming.

7. What is a preparatory function? Give two examples.

8. State the applications of a robot.

9. State the advantages of FMS.

10. State the objectives of CIMS.

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. What are the various types of production systems? Explain them with suitable examples.

12. What are the advantages, limitations of NC systems over conventional manufacturing systems?

13. With the help of a neat sketch, explain the working of CNC - CMM.

14. What are the work holding devices of CNC machining centre? Explain them.

15. Write a CNC program in G and M codes, for facing a billet of size $\Phi30$ mm × 50 mm. Take cutting speed = 1000 rpm, feed = 50 mm/min.

16. Classify robots. Write the advantages and limitations of a robot.

17. Describe various flexibilities defined under FMS.

18. What is lean manufacturing? Write the steps involved and benefits of lean manufacturing.

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