C14–M–**604**

4760

BOARD DIPLOMA EXAMINATION, (C–14)

OCT/NOV—2018

DME—SIXTH SEMESTER EXAMINATION

COMPUTER-AIDED MANUFACTURING

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. Write any three advantages of CAM.

2. Define material requirements planning (MRP–I).

3. Write any three differences between CNC and DNC systems.

4. Sketch the layout of NC system showing its components.

5. What is a turning centre? Write its classifications.

6. Define the part programming. What are the types of part programming?

7. What is miscellaneous function? Give an example for it.

8. Mention any three advantages of FMS.

9. What is a coordinate measuring machine?

10. Define a robot and list the main components of it.

PART—B 10×5=50

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

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

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

11. Explain integrated CAD/CAM organization concept.

12. Define CAM. What are the advantages of computer-aided manufacturing system over conventional manufacturing system?

13. *(a)* Explain all basic components of a DNC system with a block diagram.

  (b) Describe various types of spindle drive for CNC machines.

14. *(a)* Explain automatic tool changer with aid of a line diagram.

  (b) Explain the construction and working principle of linear transducer.

15. What are the types of statement used in APT programming? Explain each one of them.

16. Write short notes on the following :

  (a) Macros

  (b) Canned cycles

  (c) Subroutines

  (d) APT

17. List out various components of FMS and explain the function of each component.

18. What are the end effectors of robot? Explain them briefly.

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