



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*

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**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?

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7. What is <sup>\*</sup>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 <sup>\*</sup> 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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