



C14-M-604

**4754**

**BOARD DIPLOMA EXAMINATION, (C-14)**

MARCH / APRIL - 2019

**DME - VI 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) Answer should be brief and straight to the point and shall not exceed five simple sentences.

- 1 Define CAM. Write any two benefits of CAD. **1+2**
- 2 Write any six advantages of Computer integrated production system. **6× $\frac{1}{2}$**
- 3 Define Numerical control and write the components of NC system. **1+2**
- 4 Write any three differences between CNC and DNC. **3×1**
- 5 What is an encoder ? Mention any two types of encoders. **1+2**
- 6 Define the part programming. What are the types of part programming. **1+2**
- 7 Write short notes on canned cycle. **3**
- 8 Write six features of CIMS. **6× $\frac{1}{2}$**
- 9 What are the components of FMS ? **3×1**
- 10 What is an “end effector” and list different types of grippers. **1+2**

4754 ]

1

[ Contd...

**PART - B****10×5=50**

- Instructions :**
- (1) Answer any **FIVE** questions.
  - (2) Each question carries **TEN** marks.
  - (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11** Explain in detail the functions and six benefits of CAM. **7+3**
- 12** Discuss in detail about the functions, objectives and benefits of MRP-I using suitable block diagram.
- 13** (a) Draw the block diagram of CNC system and explain the functions of each component. **6**
- (b) What are the advantages of CNC system over NC system. **4**
- 14** (a) Describe various types of spindle drives. **3**
- (b) Describe briefly with a neat sketch hydrostatic slide ways and linear motion bearings. **7**
- 15** What are the steps involved in CNC part programming.
- 16** What are the statements used in APT programming ? Explain in detail.
- 17** Describe the main features of CMM with a neat sketch and mention its advantages.
- 18** (a) What are the various industrial applications of a robot ? **3**
- (b) What are the advantages and limitations of a robot ? **4**
- (c) Explain the role of a robot in CIMS. **3**
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