

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2022**

**CAD-CAM**

[Maximum Marks: 100]

[Time: 3 Hours]

**PART-A**

[Maximum Marks: 10]

I. (Answer **all** questions in one or two sentences. Each question carries 2 marks)

1. List any four benefits of CAD.
2. Define CAM.
3. Write down any four advantages of CNC machines.
4. Discuss hydraulic drive systems.
5. Describe APT.

(5 x 2 = 10)

**PART-B**

[Maximum Marks: 30]

II. (Answer **any five** of the following questions. Each question carries 6 marks)

1. Discuss CAD workstation and its functions.
2. Define solid modeling.
3. Discuss Variant type, generative type.
4. Explain 3D printing.
5. Differentiate NC and CNC.
6. Describe Adaptive Control Systems.
7. Explain feed drives.

(5 x 6 = 30)

**PART-C**

[Maximum Marks: 60]

(Answer **one** full question from each Unit. Each full question carries 15 marks)

**UNIT – I**

- III. (a) With a sketch explain the working of cathode ray tube. (8)  
(b) Explain computer networking. (7)

**OR**

- IV. (a) Discuss various topologies. (8)  
(b) Write a note on various secondary storage devices. (7)

**UNIT – II**

- V. (a) Explain the integrated CAD/CAM organization. (8)  
(b) Explain concurrent engineering and sequential engineering. (7)

**OR**

- VI. (a) Explain the Rapid prototyping. (8)  
(b) Describe Master production schedule (MPS). (7)

**UNIT- III**

- VII. (a) State the working principle of a CNC system. (8)  
(b) Explain various machining centers. (7)

**OR**

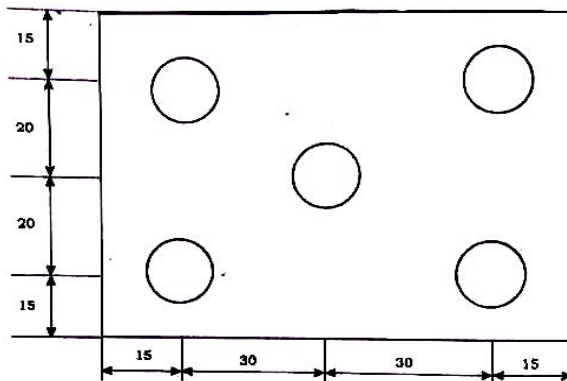
- VIII. (a) Explain DNC. (8)  
(b) List the advantages of CNC machines. (7)

**UNIT - IV**

- IX. (a) Explain motion control system in NC system. (8)  
(b) Explain the functions of G00, G01, G02, G41. (7)

**OR**

- X. The part drawing of a component is shown in figure. The speed and feed rate are 1000 RPM and 15mm/minute respectively. The diameter of all the holes are 10 mm and depth of the holes are limited to 5mm. write the manual part program for machining the component in a CNC milling centre.



(15)

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