

## Question Bank

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- Q.1 Explain CAD/CAM with and without the help of product cycle.
- Q.2 Briefly explain the different hardware components and of general purpose digital computer.
- Q.3 Explain the various types of output devices in CAD/CAM. Briefly discuss the various reasons for implementing CAD/CAM System.
- Q.4 Explain geometric modeling and finite element analysis in CAD.
- Q.5 Define NC system. Explain working of basic components of NC machine.
- Q.6 Explain Direct Numerical Control system.
- Q.7 Write short notes on the following
- (i) Fixed zero and Floating zero
  - (ii) Continuous path system
  - (iii) Automated Guided Vehicle
- Q.8 Define Robot. Explain different components of a robot.
- Q.10. Explain the factors, which inhibit the use of a very high resolution and a large number of colours for display in the case of raster scanning display devices?
- Q.11. Give the general configuration of a CAD computer system.ii In what ways CAD can help manufacturing activity? Discuss.
- Q.12 CAD helps in integrating CAM- Justify this statement.
- Q.13 How do you specify a plotter for graphics application?ii. Explain the four types of production.
- Q.14. Briefly describe the types of storage devices used in computers.
- Q.15 In design, what do you understand by synthesis and engineering analysis?
- Q.16. Briefly explain the conventional process of the product cycle in the conventional manufacturing environment.
- Q. 17 What is the structure of a computing system?ii. What do you understand by the CPU?
- Q.18 List the advantages of computer aided design.ii. Bring out clearly the difficulties a design engineer has to face at each of the design stages if they are carried out manually.

Q.19 How does a CRT work?

Q.20 What are the capabilities and limitations of directed beam refresh graphics terminal?

Q.21 Write briefly on the secondary storage devices used in CAD System.

Q.22. Write short notes on the following: Random scan graphic terminal, Digitizers and Image scanners.

Q.23. What are the reasons for implementing a computer aided design system.

Q.24 With the help of a block diagram, explain the computer aided design process.

Q.25 Explain how an image is generated and maintained in a direct beam refresh terminal.

Q.26 What is a digitizer? Explain how it can be used for transferring paper drawing to CAD system.

Q.27 A scaling factor of 2 is applied in the Y direction while no scaling is applied in the X direction to the line whose two endpoints are at coordinates (1, 3) and (3,6). The line is to be rotated subsequently through 300, in the counter clock wise direction. Determine the necessary transformation matrix for the operation and the new coordinates of the end points.

Q.28. The vertices of a triangle are situated at points (15, 30), (25, 35) and (5, 45). Find the coordinates of the vertices if the triangle is first rotated 100 counter clockwise direction about the origin and then scaled to twice its size.

Q.29. Explain the details of polygon clipping. Give its advantages compared to the line clipping.

Q.30. What is the need for concatenation of transformations? Explain what care should be taken in such cases.