SRI VIDYA COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

ME6501COMPUTER AIDED DESIGNQUESTION BANK

UNIT – I

Part A

1. Explain the factors, which inhibit the use of a very high resolution and a large Number of colors for display in the case of raster scanning display devices?
2. Give the general configuration of a CAD computer system.
3 .In what ways CAD can help manufacturing activity? Discuss.
4. CAD helps in integrating CAM- Justify this statement.
5. How do you specify a plotter for graphics application?
6. Explain the four types of production.
7. Briefly describe the types of storage devices used in computers.
8. In design, what do you understand by synthesis and engineering analysis?
9. Explain how CAD helps to synthesize a product design and do engineering analysis for getting optimal design.
10. Briefly explain the conventional process of the product cycle in the Conventional manufacturing environment.
11. What is the structure of a computing system?
12 .What do you understand by the CPU?
13. List the advantages of computer aided design.
14. Bring out clearly the difficulties a design engineer has to face at each of the Design stages if they are carried out manually.
15. What is meant by homogeneous coordinate?
16. Difference between sequential and concurrent engineering?
17. Write briefly on the secondary storage devices used in CAD System.
18. What are the functions of an interactive graphic design workstation?
19. Explain with the help of a neat sketch, how an image is generated on a

computer terminal.

20. What is meant by clipping? Explain with the help of a diagram.

Part-B

1. Elaborate on the basic requirements that a CAD software has to satisfy.

2.Distinguish between modes of the design process and models of designs.

3. Describe the various database models which are generally used.

4. What are the differences between the sequential approach to the product development process and the concurrent engineering approach?Why should the latter be adopted?

5. 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 end points are at coordinates (1, 3) and (3,6). The line is to be rotated subsequently through 300, in the counter clockwisedirection. Determine the necessary transformation matrix for the operation and the new coordinates of the end points**.**

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

7.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**.**

8. Describe the basic types of coordinate transformation in CAD,and then show how these may all be calculated using matrix operations through the homogeneous coordinate with an example of matrix .How may a general rotation transformation be expressed in terms of a combination of other transformation..

9.What is meant by Interactive Computer Graphics? Explain its various elements

10. Briefly explain the Clipping and Line drawing with an example.