QUESTION BANK
Unit Test-II

Program : - Computer Engineering Group | Program Code:- CO/CM
Course Title: - Computer Graphics | Semester: - Third
Course Abbr &Code:-CGR (22318) | **Scheme:I**

CHAPTER 3: Overview of Transformations (18 Marks) (CO4)

2 Marks

a) State the concept of Vanishing point.
b) Explain the terms shear and reflection.
c) Give the rotation matrices for all co-ordinate axis.

4 Marks

1 Explain perspective projection with its types.

2 Find a transformation of triangle A(1,0),B(0,1),C(1,1) by

i. Rotating 45^0about the origin and then translating one unit in x and y direction.

ii. Translating one unit in x and y direction and then rotating 45^0about the origin

3 Apply the Shearing transformation to square with A(0,0),B(1,0),C(1,1) and D(0,1) as given below :

i. Shear parameter value of 0.5 relative to the line Yref= -1;

ii. Shear parameter value of 0.5 relative to the line Xref= -1;

4 Explain parallel projection with its types.

CHAPTER 4 : Windowing and Clipping (14 Marks)(CO5)

2 Marks

1 Define Window and viewport.
2 List four text clipping techniques.
3 Explain polygon clipping.
4 List the steps involved in viewing transformations.
5 Define world co-ordinate system.

4 Marks

1 Write algorithm to clip line using Cohen Sutherland line clipping algorithm.

2 Explain Window to Viewport transformation.

3 Use the Cohen Sutherland algorithm to clip two lines P1(40,15)-P2(75,45) and P3(70,20)-P4(100,10) against a window A(50,10),B(80,10),C(80,40),D(50,40).

d) Write algorithm to clip line using Liang Barsky line clipping algorithm.

5 Write a program in C to clip polygon using Sutherland Hodgemane. polygon clipping algorithm.

CHAPTER 5: Introduction to Curves (12 Marks)(CO6)

2 Marks

1 List any four types of Curves.
2 State the concept of Interpolation.
3 Define spline curves.
4 State the applications of Bezier splines.

4 Marks

1 Explain Hilbert's curve with diagram.
2 Explain Arc generation technique using DDA algorithm.
3 Write a program in C to generate Hilbert's curve.
4 Explain the procedure to generate Bezier curve.