Unit 1

1. How Color is handled in RGB color model? Explain the use of indexed color for setting color attribute

2. Write explanatory note on :- i. RGB color model ii. Indexed color model

3. Differentiate between emissive and non -emissive display.

4. Name the techniques for producing color display with CRT

5. Explain sierpinski gasket model in detail?

6. Explain Graphics Architectures in details?

7. Explain various application of Graphics programming?

8. Explain in details Physical and Synthetic graphics system?

9. Explain in detail programmable pipeline architecture?

Unit 2

1. Classify the major groups of graphics function in open GL .Explain in detail with suitable example.

2. Explain polygon basics and different types of polygons in OpenGL.

3. Write a program in open GL to display a rectangle.

4. Write Open GL code to draw the following primitives

    a]. Line-loop b]. Polygon c]. Line d]. Line Strip

5. How to draw lines using OpenGL?

6. Explain glOrtho2D function.

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Unit 3

1. Write OpenGL program for keyboard event handling.

2. Write an OpenGL program to implement Menu driven event handling using programming.

3. Write an OpenGL program to implement mouse event handling.

4. Write short note on scalar, point, vectors?

5. Explain different types of input devices.

6. Write short notes on co-ordinate systems and frames.

7. Explain in details affine transformation.

8. Explain scaling rotation and translation with example.

9. How display list is generated? Give suitable example.

Unit 4

1. Explain transformation in homogenous co-ordinate system?

2. Explain concatenation of transformation with example?

3. Consider on object ABC with co-ordinates A (1,1) ,B (10,1) ,C (5,5) Rotate the object by 90 Degree in counter clockwise direction and give co-ordinates of transformed object.

4. What is pipeline processor architecture? How does it increase processing speed? What are the core performance issues?

5. Explain Why homogeneous coordinates are used for handing geometric transformation.

A triangle is defined by [2 4 4]

[2 2 4]

Find the transformed coordinates after the following transformation -: i. 90 rotation about origin. ii. Reflection about line y =-x.

6. Apply following transformations on polygon A(10,10) ,B(10,40),C(30,10) D(20,50)and E(30,40). i. Translation 10, 20 units along X&Y directions. ii. Rotate 45 degrees about the origin. iii. Scale with scaling factor .

7. Write short notes on Quaternion's?   8. Explain object space and image space techniques.

9..Define pivot point for rotation.   10.Scaling factor   11.Rotation about fixed point

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Unit 5

1.Explain phong lighting model .Indicate the advantages and disadvantages.

2.Differentiate between window port and view port

3. Compare COP and DOP.

4. Explain object space and image space techniques

5. aspect ratio

6. List differences between parallel and perspective projection along with their OpenGL functions

7. Explain the various types of parallel and perspective projection.

8. What are the different methods available for shading a polygon? Briefly discuss any two of them.

9. Describe the different types of light sources in detail.

10. Explain in details shading of sphere model.

11. Explain global illumination in detail.

12.Explain back face detection method and depth buffer method.

13.Distinguish between Gouraud and phong shading methods.

14.Define look A+ ().Explain different parameters used in the look A+ () function.

15 Define following terms

a]. Vanishing point

 b]. Classical viewing

c]. Axonometric projection

d]. What is diffuse reflectivity?

e]. What is illumination model?

f] ambient refection

16. What are different classical perspective views?

17 Explain the function used for parallel viewing in open GL.

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Unit 6

1.What is line clipping? Explain cohen-Sutherland line clipping algorithm with suitable example.

2. Explain polygon clipping with suitable example.

3. Use Bresenhams line drawing algorithm to rasterize the line with end points (4,2)and (10,5).

4.Explain Bresenhams line drawing algorithm with example.

 5.Explain DDA line drawing algorithm with example.

6.Explain in detail the four major tasks for sending a geometric entity.

7.Explain Hidden surface removal in detail.

8. Write short note on

1. What is Aliasing and antialising?

 2.rasterization.

3. Lambertian surface
4. What is animation?

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