



CS6504-COMPUTER GRAPHICS

Question Bank

UNIT – I INTRODUCTION

PART – A

1. Define Computer Graphics
2. Define persistence, resolution and aspect ratio.
3. What is horizontal and vertical retrace?
4. What is a raster scan system?
5. What is a random scan system?
6. Write down the attributes of characters.(AU MAY/JUNE 2012 IT)
7. Digitize a line from (10,12) to (15,15) on a raster screen using Bresenham's straight line algorithm.
8. What is antialiasing?
9. What do you mean by emissive and non-emissive displays?
10. What do you mean by scan conversion?
11. What is an output primitive?
12. Distinguish between convex and concave polygons?
13. What is seed fill?

PART - B

1. Explain refresh cathode ray tube.
2. Explain color CRT monitors.
3. Explain direct view storage tubes and liquid crystal displays.
4. Write short notes on Raster scan systems.
5. Describe in detail about the DDA scan conversion algorithm?
6. Write down and explain the midpoint circle drawing algorithm
7. Explain Ellipse generating Algorithm.
8. Explain in detail about Bresenham's line generating algorithm. Give example.
9. Explain in detail about Bresenham's circle generating algorithm. Give example.
10. Explain in detail about Bresenham's ellipse generating algorithm. Give example.
11. Explain in detail about video display devices.
12. Explain in detail about raster and random scan systems.

Unit-II TWO DIMENSIONAL GRAPHICS

PART - A

1. What is Transformation?
2. What is shearing?
3. What is reflection?
4. Distinguish between window port & view port.
5. Define clipping.
6. What is the need of homogeneous coordinates?
7. What is fixed point scaling?



8. Define Affine transformation?
9. List out the various Text clipping.
10. What is the use of clipping?(may/june 2012)
11. How will you clip a point?(may/june 2013)
12. Define viewing transformation.

PART - B

1. Explain reflection and shear?
2. Explain Liang Barsky line clipping
3. Explain Sutherland Hodgeman polygon clipping
4. Explain about clipping operations
5. Explain in detail about window to viewport coordinate transformation.
6. Write a detailed note on the basic two dimensional transformations.
7. Explain with an example the Cohen-Sutherland line clipping algorithm.
8. Compare Cohen-Sutherland line clipping algorithm and Liang-Barsky line clipping algorithm.

UNIT – III THREE DIMENSIONAL GRAPHICS

PART – A

1. What are the various representation schemes used in three dimensional objects?
2. What is Polygon mesh?
3. Define B-Spline curve.
4. What is a spline?
5. What is the use of control points?
6. What are the different ways of specifying spline curve?
7. What are the important properties of Bezier Curve?
8. Differentiate between interpolation spline and approximation spline.
9. What is a Bloppy object?
10. Define Octrees.
11. Define Projection.
12. What do you mean by view plane?
13. What is view-plane normal vector?

PART-B

1. Explain spline representation
2. Explain Back face detection method and Depth buffer method
3. Explain area subdivision and A- Buffer method
4. Briefly explain about the basic transformations performed on three dimensional objects.
5. Write short notes on parallel and perspective projections.
6. Explain in detail about three dimensional display methods.
7. Explain in detail about the boundary representation of three dimensional objects.
8. Explain in detail about the three dimensional transformations.
9. Explain in detail about 3D window to viewport coordinate transformation.



UNIT – IV ILLUMINATION AND COLOUR MODELS

PART-A

1. What are subtractive colors?(may/june 2012)
2. What do you mean by shading of objects?(nov/dec 2011)
3. What is texture?(nov/dec 2011)
4. What are the types of reflection of incident light?(nov/dec 2013)
5. Define rendering (may/june 2013)
6. Differentiate flat and smooth shading (may/june 2013)
7. Define shading (may/june 2012)
8. What is a shadow? (nov/dec 2012)
9. What are the two common sources of textures?
10. Define intensity of light.
11. What is hue?
12. What is purity of light?
13. Define the term chromacity.
14. Define complementary colors.
15. Define primary colors.
16. State the use of chromaticity diagram.

PART – B

1. Explain in detail about XYZ color model.
2. Explain in detail about RGB color model.
3. Explain in detail about YIQ color model.
4. Explain in detail about CMY color model.
5. Explain in detail about HSV color model.
6. Compare and contrast RGB and CMY.
7. Explain in detail about the conversion between HSV and RGB color models.
8. Explain in detail about HLS color model.
9. Explain in detail about shading models.
10. Explain about shading and graphics pipeline.
11. Compare Flat shading and Smooth shading.
12. Explain Gouraud shading and Phong shading.

UNIT – V ANIMATION AND REALISM

PART-A

1. Define computer graphics animation.
2. What is tweening?
3. Define frame.
4. What is Fractals?
5. What is random fractal?
6. What is Koch curve?
7. What is turtle graphics program?
8. What is graftals?
9. What is a Particle system?



PART-B

1. Explain about fractals and self-similarity.
2. Give an account about Peano curves.
3. Explain the methods for creating images by means of iterated function systems.
4. Explain about the Mandelbrot set.
5. Explain about Julia sets.
6. Give a detailed account of random fractals.
7. Explain how to find the intersection of a ray with an object.
8. Give an account on adding surface texture.
9. Explain about reflections and transparency.
10. Explain the Boolean operations that can be performed on objects.