

Register Number.....

B.TECH. DEGREE EXAMINATIONS: NOV/DEC 2012

Fifth Semester

INFORMATION TECHNOLOGY

CSE109: Computer Graphics

Time: Three Hours

Maximum Marks: 100

Answer All Questions:-

PART A (10 x 1 = 10 Marks)

1. Time taken for the emitted light from the screen to decay to one-tenth of its original intensity is defined as
 - a) Persistence
 - b) Resolution
 - c) Aspect ratio
 - d) Luminance
2. Which property of a circle reduces computation in Bresenham's circle drawing algorithm
 - a) Circular
 - b) Consistent
 - c) Uni Dimensional
 - d) Symmetric
3. Which of the following is not the application of exterior clipping
 - a) multiple window system
 - b) Cropping a picture
 - c) Combining maps
 - d) Combining graphs
4. Degenerate polygon is a
 - a) concave polygon
 - b) Convex polygon
 - c) Straight line
 - d) Split polygon
5. Setting surface intensity of the object according to lighting condition is called
 - a) Depth cueing
 - b) Stereoscopic view
 - c) Surface rendering
 - d) Perspective Projection
6. Number of control points to be approximated and their relative position determine _____ of Bezier polynomial
 - a) Degree
 - b) Number of Terms
 - c) Constant term
 - d) Type
7. Which of the following preserves relative proportions of objects
 - a) Perspective Projection
 - b) Parallel Projection
 - c) Horizontal Projection
 - d) Vertical Projection
8. The point at which a set of projected parallel lines appears to converge is
 - a) Secondary Vanishing Point
 - b) End point
 - c) Vanishing Point
 - d) Dummy Point
9. Chromaticity refers to
 - a) Purity and saturation
 - b) Hue and Purity
 - c) Dominant Frequency and Hue
 - d) Luminance

10. Which of the following is obtained when white pigment is added to a original color
- a) shades b) Tints c)Tones d) fades

PART B (10x2=20 Marks)

11. Why calligraphic displays are called so? What method is used in them for displaying color pictures?
12. Give the transformation sequence towards device coordinates.
13. What is rigid body transformation? Give Example.
14. What is affine Transformation?
15. How are representation schemes for solid objects categorised?
16. Give examples of Blobby objects.
17. What are the advantages of Quaternion?
18. What are the types of parallel projection?
19. What are the steps in animation sequence?
20. What is scene Description?

PART C (5x14= 70 Marks)

21. a) (i) Determine the successive pixel positions along with decision parameter value for drawing a line with end points(20,10) and (30,18) using Bresenham's line Drawing algorithm. (10)
- (ii) Write a brief note on software standards for graphics. (4)

(OR)

- b) (i) Discuss briefly about Raster Scan systems. (6)
- (ii) Explain Bresenham's Ellipse Drawing Algorithm with an example. (8)

22. a) Discuss in detail various 2D transformations with suitable examples.

(OR)

- b) (i) Discuss in detail Cohen Sutherland Line Clipping algorithm with an example. (10)
- (ii) Write a brief note on two dimensional viewing transformation pipeline. (4)

23. a) Discuss briefly about three dimensional display methods.

(OR)

- b) (i) Explain three dimensional object representation using polygon surfaces. (10)
- (ii) Explain how spline representation is specified? (4)

24. a) (i) Discuss in detail three dimensional geometric transformations with examples. (10)
(ii) Explain three dimensional Viewing Pipeline. (4)

(OR)

- b) Explain in detail three dimensional Clipping in detail.

25. a) Discuss briefly about various color models.

(OR)

- b) (i) Write a brief note on color selection and application. (4)
(ii) Discuss briefly about key frame systems. (10)
