QUESTION BANK

SUBJECT: COMPUTER GRAPHICS
CLASS: BCA 5TH SEMESTER

Q1. Write the midpoint circle drawing algorithm.

Q2. List the advantages of using Bresenham's line drawing algorithm.

Q3. What is the purpose of a frame buffer in a display system?

Q4. How does Cohen Sutherland algorithm determine whether a line is visible, invisible or a candidate for clipping based on the region codes assigned to the end points of the line?

Q5. A triangle ABC with coordinates A(0,0), B(6,5), C(6,0) is scaled with scaling factors Sx=2 and Sy=3 about the vertex C(6,0). Find the transformed coordinate points.

Q6. Write the 3D translation matrix for moving an object by -2 units, -4 units and -6 units respectively in x, y and z directions.

Q7. Explain the working principle of a Refresh CRT monitor with suitable diagrams.

Q8. Show that transformation matrix for a reflection about the line y=x is equivalent to a reflection relative to the x axis followed by a counter clockwise rotation of 90 degree.

Q9. List various applications of Computer Graphics.

Q10. Differentiate between raster scan systems and random scan systems.

Q11. What do you mean by window and viewport? Describe window to viewport transformation.

Q12. Derive the decision parameter expressions for Bresenham line drawing algorithm. Write Bresenham line drawing algorithm and explain how it is better than DDA algorithm for line generation.

Q13. Describe in detail Sutherland-Hodgeman polygon clipping algorithm. What are its shortcomings?

Q14. What are Bezeir curves? Explain in detail.

Q15. Explain the difference between LCD and CRT televisions.