Q 1) Differentiate between Computer Graphics and Image Processing. List down five-application area of Computer Graphics.

Q 2) a) Differentiate Raster Scan Displays and Random scan Displays.

b) Write down the condition when an ellipse become a circle and formulate it.

Q 3) A unit square is transformed by 2x2 transformation matrix. The resulting position vector are: $\begin{bmatrix} 0 & 2 & 8 & 6 \\ 0 & 3 & 4 & 1 \end{bmatrix}$, what is the transformation matrix?

Q 4) Rotate a triangle A(0,0) , B(2,2) , C(4,2) about the origin and about P(-2,-2) by and angle of 45^0.

Q 5) Develop the Bresenham's line drawing to draw lines of given scope start point is (20, 41) and end point is (30, 44). Compare this with the DDA Algorithm on different perspective like expensive, accuracy, efficiency, arithmetic, operative, round off etc. Is there any condition where DDA is better than Bresenham's?

Q 6) Briefly explain Midpoint Ellipse Drawing Algorithm. The input parameters, length of major axis is 16 and length of minor axis is 12.

Q 7) Translate a square ABCD with the coordinates A(0,0),B(5,0),C(5,5),D(0,5) by 2 units in x-direction and 3 units in y-direction.

Q 8) Obtain the mirror reflection of the triangle formed by the vertices A(0,3), B(2,0) and C(3,2) about line passing through the points (1,3) and (-1,-1).

Q 10) Clip the following figure with Sutherland Hodgeman algorithm and discuss its disadvantage with example.