7 marks questions:-

1. Explain Bresenham’s Line Drawing Algorithm and summarize it’s advantages and disadvantages . (K2)
2. Interpret the midpoint Circle drawing algorithm? Assuming 10 cm as the radius and origin (0,0) as the center of the circle, find the circle boundary points on a single quadrant to draw the given circle. (K2)
3. Analyze the Bresenham’s Line Drawing Algorithm to discover the intermediate points of a line, assume the end points of the line as (1,1) and (8,5). (K4)
4. Given the end points of the line as (5,4) and (12,7), utilize the DDA algo to solve and carry out the complete line. Also write the different pros and cons of DDA Algorithm. (K3)
5. A Triangle of given vertices (0,0), (1,1) and (5,2) is translated by factors of tx=1, ty=2 and then rotated anticlockwise with an angle of 45 degree. Apply the 2D Transformation equations to solve and find the resultant vertices of the triangle after applying the said transformations. (K3)
6. Distinguish the different features of Raster Scan Display and Random Scan Display and differentiate between them. (K4)
7. Describe and Analyse in detail, the DDA Line Drawing Algorithm. (K4)
8. Draw a neat diagram for CRT(Cathode Ray Tube) and use it to analyse the different components of CRT and discover their functionalities in detail. (K4)
9. Utilize the 2 D geometric transformation matrices, to build the matrix for rotation about a general point P(h,k). (K3)
10. Articulate about the 2 D Geometric Transformation in detail and apply 2D Transformation to build the Transformation Matrices and equations. (K3)

4 Marks Questions:-

1. Explain about Frame Buffer and Video Controller. (K2)
2. Illustrate the need of Homogeneous coordinates. Show, how can we extend the 2\*2 transformation matrices into 3\*3 transformation matrices using homogeneous coordinates. (K2)
3. Summarize the different applications of Computer Graphics. (K2)
4. Explain the different types of Computer Graphics. (K2)

5 Marks Questions:-

1. A point (2,-4) is rotated anticlockwise by an angle of 30 degree about the origin. Apply the rotation transformation to compute the new point after rotation. (K3)
2. Apply Scaling Transformation to magnify the triangle with vertices A (0,0), B(1,1) and C(5,2) to twice its size while keeping c(5,2) fixed.