

School of Computing Science and Engineering

B.Tech CSE
ETE - Jun 2023

Time : 3 Hours

Marks : 100

Sem IV - E2UC402B / BTCS2401

Computer Graphics

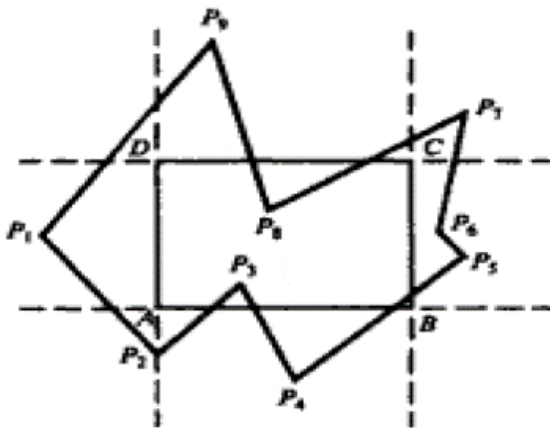
Your answer should be specific to the question asked

Draw neat labeled diagrams wherever necessary

1. Illustrate Refreshing, Refresh Rate and Critical Fusion Frequency in Display Devices. K3 CO1 (5)
2. Illustrate how Random Scan System is different from Raster Scan System? K1 CO1 (5)
3. Illustrate the different types of Computer Graphics. K2 CO1 (5)
- 4) Explain Mid Point Circle Generation Algorithm. Generate points for one octant (90 deg to 45 deg), of a given circle with radius 7 unit and centre at (0,0). K4 CO3 (10)

OR

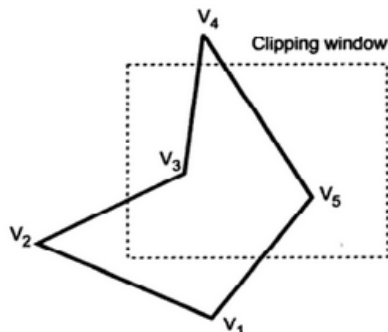
- Calculate the pixel locations approximating the first octant of a circle having centre at (0,0) and radius 6 units. K4 CO3 (10)
5. Explain DDA Line Drawing Algorithm and find the intermediate points of line having end points (2,2) and (9,7) K4 CO2 (10)
 6. Explain basic transformations with homogeneous coordinate representation. K1 CO1 (10)
 7. Analyse the different 3 D Transformations and its types. Also Discover their transformation matrices and equations. K2 CO2 (10)
 - 8) K4 CO4 (15)



Hodgeman Algorithm.

Clip the given polygon using Sutherland

OR



Clip the given polygon using any Polygon Clipping Algorithm.

9. Compare and Contrast between Bezier, Spline and B Spline Curve. K3 CO4 (15)
10. Use Transformation matrices to carry out a 45 degree rotation of triangle A(0, 0), B(1, 1), C(5, 2) about P(-1, -1) followed by reflection w.r.t y axis K3 CO2 (15)