

Code No: MC1625/R16

MCA II Semester Supplementary Examinations, September-2022

COMPUTER GRAPHICS

Time: 3 Hours

Max. Marks: 60

*Answer Any FIVE Questions
All Questions Carry Equal Marks*

1. a) Generate the points between the end points of a line viz.(2,2) and (9,6) by using Bresenham's line drawing algorithm. 6M
b) Describe the relevance and various methods of inside-outside test used in Polygon filling. 6M
2. a) Explain the Sutherland Hodgeman algorithm for polygon clipping with an example. 6M
b) Show that 2-D scales and rotations do not commute in general. 4M
c) Write the general form of the matrix for rotation about a point P(h, k). 2M
3. a) Write an algorithm for the generation of Bezier curves. 6M
b) Explain an algorithm for the generation of B-spline. 6M
4. a) Explain about parallel projection and perspective projection. 6M
b) Discuss area sub-division and octree schemes of solid modeling. 6M
5. a) Explain about computer animation languages. 6M
b) What is the mechanism followed for tracking live action in animated scenes? Explain. 6M
6. a) List and describe the polygon tables representation for polygon surfaces of a 3-D object. 6M
b) Discuss the characteristics of key-frame animation. 6M
7. a) Discuss clearly about Back-Face Detection method. 6M
b) How rotation is done in 3D objects? Explain in detail with help of example. 6M
8. a) Explain about different line drawing algorithms. 6M
b) What is the need of homogeneous coordinates? Give the homogeneous coordinates for translation, rotation and scaling. 6M

1 of 1