25/11/2024 CSE-AIML SEM-III C SCHEME CG QP CODE: 10065712

Time : 3 Hours **Marks: 80**

N.B: 1) Question **number 1** is compulsory.
2) Attempt **any three** out of the remaining.
3) Assume suitable data if **necessary** and justify the assumptions.
4) Figures to the **right** indicate full marks.

Q.1 Attempt **any four** **20**

a) Give difference between random scan display and raster scan display.

b) Define Aliasing, Describe different antialiasing techniques.

c) Compare DDA and BRESENHAM line drawing algorithm.

d) Explain point clipping algorithm.

e) Give fractal dimension for KOCH curve.

Q.2 a) Derive formula for mid-point circle algorithm. **10**

b) Given a line AB where A(0,0) and B(1,5) calculate all the points of line AB using DDA algorithm. **10**

Q.3 a) With neat diagram explain Composite transformation. **10**

b) Given a triangle ABC where A(0,0), B(-10,-10) and C(10,-10) rotate the given triangle ABC 180 degree in anti-clockwise direction. Find out the new co-ordinate of triangle ABC after rotation. **10**

Q.4 a) With neat diagram explain window to viewport coordinate transformation. **10**

b) With neat diagram explain Sutherland Hodgman polygon clipping algorithm. **10**

Q.5 a) Define projection, with neat diagram describe planar geometric projection. **10**

b) Describe properties of BEZIER curve. **10**

Q.6 a) Describe various principles of traditional animation. **10**

b) Write short note on Depth buffer algorithm. **10**
