(3 Hours) **Total Marks: 80**

N.B: 1. Question No. 1 is compulsory
2. Attempt any 3 from remaining questions
3. Assume any suitable data if necessary and justify the assumptions

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(3,1) and B(0,0) calculate all the points of line AB using DDA algorithm. 10

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

b) Describe what is Homogeneous coordinates. 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

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