

Time : 3 Hours

Marks: 80

QP-10065712

- 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

- Give difference between random scan display and raster scan display.
- Define Aliasing, Describe different antialiasing techniques.
- Compare DDA and BRESENHAM line drawing algorithm.
- Explain point clipping algorithm.
- Give fractal dimension for KOCH curve.

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

- 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

- 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

- With neat diagram explain Sutherland Hodgman polygon clipping algorithm. 10

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

- Describe properties of BEZIER curve. 10

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

- Write short note on Depth buffer algorithm. 10