Total No. of Questions—**8**] [Total No. of Printed Pages—**2**

Seat No.	

[4957]-1086

S.E. (IT) (Second Semester) EXAMINATION, 2016

COMPUTER GRAPHICS

(2012 Pattern)

Time : Two Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Solve Q. **1** or Q. **2**, Q. **3** or Q. **4**, Q. **5** or Q. **6**, Q. 7 or Q. **8**

(*ii*) Neat diagrams must be drawn wherever necessary.

(*iii*) Figures to the right indicate full marks.

(*iv*) Use of calculator is allowed.

(*v*) Assume suitable data if neccssary.

1. (*a*) Differentiate between random scan and raster scan display. [6]

(*b*) Interpret Digital Differential Analyzer (DDA) algorithm to find which are pixel are turned on for the line segment between (3, 4) and (9, 8). [6]

Or

2. (*a*) Consider a Square A (1, 0), B(0, 0), C(0, 1), D(1, 1). Rotate the square by 45º degree anticlockwise direction followed by reflection about X-axis. [6]

(*b*) Explain with suitable diagram different methods for seed point inside test for polygon. [6]

P.T.O.

3. (*a*) Explain Sutherland-Hodgeman Line Clipping method with suitable example. [6]

(*b*) Explain with example Window to Viewport Transformation. [6]

Or

4. (*a*) Explain display file structure. Why is display file interpreter used ? Which are the commands used in display file interpreter. [6]

(*b*) Explain parallel and perspective projection with diagram. [6]

5. (*a*) Explain HSV and HLS Color Models. [6]

(*b*) What is Shading ? What steps are required to shade an object using Phong shading algorithm ? [7]

Or

6. (*a*) Define Color and Color Gamut. Also explain CIE chromaticity diagram. [6]

(*b*) What are the steps in design in animation sequence ? Describe about each step briefly. [7]

7. (*a*) Explain B-Spline curve and give at least two advantages over Bezier Splines. [6]

(*b*) Explain Hilbert curve in detail. [7]

Or

8. (*a*) Write short notes on : [6]

(*i*) Koch curve

(*ii*) Fractal and topological dimensions.

(*b*) What is interpolation ? Explain the process of curve approximation by Lagrange interpolation method. [7]