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

Seat No.	

[5252]-576

S.E. (Information Technology)(Second Semester)

EXAMINATION, 2017

COMPUTER GRAPHICS

(2015 PATTERN)

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

N.B. **:—** (*i*) Neat diagram must be drawn wherever necessary.

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

(*iii*) Assume suitable data, if necessary.

1. (*a*) Derive equation for decision parameter of Bresenham's circle algorithm. [6]

(*b*) What are the different steps for rotation about an arbitrary point in 2D ? [6]

Or

2. (*a*) Interpret Bresenham's algorithm to find which pixels are turned on for the line segment between (1, 2) and (7, 6). [6]

(*b*) Write pseudo code for Boundary fill algorithm. Compare boundary fill algorithm with scan line algorithm. [6]

3. (*a*) Explain with the help of suitable diagram parallel and perspective projection. [6]

(*b*) Explain Midpoint subdivision line clipping method with suitable example. [6]

P.T.O.

Or

4. (*a*) Explain basic transformations on 3D. [6]

(*b*) What is segment ? Explain the concept of segment table and display file. [6]

5. (*a*) Explain in detail Graphics memory pipeline. [7]

(*b*) Explain pseudo C Algorithm for Gourad Shading. [6]

Or

6. (*a*) Draw and explain block diagram of i860 microprocessor. [7]

(*b*) What is animation ? Explain the basic rules required for Animation. [6]

7. (*a*) Write the properties of Bezier and B-spline curves. [7]

(*b*) Why cubic Bezier curves are chosen ? Explain any Bezier curve generation method. [6]

Or

8. (*a*) Explain how Koch curves are generated. Also calculate the fractal dimension of Koch curve. [7]

(*b*) Define fractals with examples. Give various categories in which fractals are classified. [6]