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[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]

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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]