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Register Number:

DATE: 11-04-2017

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27**

**IV Semester Examination, April 2017**

**B C A**

**CA 4115 : Computer Graphics**

 **Time 2.5 Hrs Max Marks 70**

**This paper contains 1 printed page and 3 parts**

**PART-A**

**Answer all TEN questions 2 x10 = 20**

1. List out the difference between raster scan and random scan.
2. What is frame buffer?
3. Define circle.
4. Define ellipse.
5. What is reflection?
6. Explain about Region Code.
7. What is point clipping?
8. List out the pointing devices.
9. What is Octrees?
10. What is Z-buffer algorithm for removing hidden surface?

**PART-B**

**Answer any FIVE questions 6 x5 = 30**

1. Explain the working of CRT with a neat diagram.
2. Explain Cohen Sutherland algorithm with an example.
3. Explain 2D Rotation.
4. Explain the properties of curves in 3D.
5. List out the differences between Object space and Image space algorithms.
6. Explain the different types of Clipping.
7. Write a program to draw a straight line using Bresenham’s technique.

**PART-C**

**Answer any TWO questions 10 x2 = 20**

1. Explain the Midpoint circle algorithm. Assume 10cm as the radius and coordinate origin as the centre of the circle.
2. Explain all 3D transformations.
3. Write a short note on a) Octrees b) Mouse.

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