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Register Number:

DATE:

**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 2 printed pages and 3 parts**

**PART-A**

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

1. What is Aspect ratio and Resolution?
2. Define Digital Differential Analyser algorithm.
3. What are line attributes?
4. What is Rotation?
5. Give 3\*3 transformation to rotate an object.
6. Difference between window and viewport.
7. Give two examples of touch screen.
8. Define projection.
9. What is the use of hidden line removing algorithm.
10. What is colour model?

**PART-B**

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

1. With a neat diagram explain the working of a shadow mask CRT.
2. Explain the differences between Raster scan CRT and Random scan display.
3. Explain the DDA line drawing algorithm with an example.
4. What is 2D reflection and explain in detail.
5. a. Explain the three dimensional translation.

b. Write a note on window to view port transformation.

1. Write a note on Sutherland Hodge man polygon clipping.
2. Write the difference between Image space and Object space methods of hidden surface and hidden line algorithm.

**PART-C**

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

1. Write a program to draw a circle using Bresenham’s technique.
2. Explain Cohen-Sutherland line clipping algorithm.
3. Explain Depth Buffer algorithm.