**ST. Joseph’s College (Autonomous), Bangalore**

**IV Semester Examination, April 2017**

**B C A**

**CA 4115 : Computer Graphics**

**Register No:**

**Date:**

**Date:**

**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 are the factors affecting CRT monitor.
2. What are the different attributes of a Line?
3. Write a note on reflection.
4. Write a note on Random Scan Displays.
5. Explain about Region Code.
6. Briefly explain window to viewport transformation.
7. List any six advantages of computer graphics.
8. Write a brief note about 3-dimensional coordinate system.
9. List any three advantages of curves in graphics.
10. Write a note on shadow Mask CRT.

**PART-B**

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

1. a) Write down the steps involved in DDA line drawing algorithm.
2. Explain the concepts involved in 2 dimensional translations.

12. a) Explain the functioning of raster scan monitors with suitable

diagram.

b) What is clipping? What are the steps involved in clipping?

13. Differentiate between Depth buffer method and scan line method.

14. Differentiate between 2 dimensional and 3 dimensional rotation in

geometric transformation.

15. Explain the following

1. Hidden line removal (3 marks)
2. Parallel projection and perspective projection. (3marks)
3. Explain Bresenham’s circle generating algorithm with suitable example.

17. Explain Cohen-Sutherland line clipping algorithm.

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**PART-C**

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

18. Explain the functioning of the cathode ray tube with suitable diagram.

19. a) Write down the steps involved in Bresenham’s line drawing

algorithm. (5 marks)

b) Draw a line with the end points (10,10) and (20,18) using

Bresenham’s line drawing algorithm. (5 marks)

20. Explain the following 3 dimensional transformations

a) Translation (5 marks)

b) Scaling (5 marks)