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

Register Number:

Date:

**B.Sc VI SEMESTER**

**SEMESTER EXAMINATION: APRIL 2019**

**CS 6215- COMPUTER GRAPHICS**

**Time – 2.5 hours Max Marks-70**

**I Answerall the following 2\* 10=20**

1. Mention the factors affecting CRT.
2. Give the initial decision parameter equation for Bresenham’s line drawing Algorithm
3. What is Major and Minor axis?
4. Mention the difference between Viewport and Window.
5. Write the attributes of a line.
6. Write the matrix of 2D Rotation.
7. List out any four input devices that are used in graphics field.
8. What are Composite transformations?
9. Mention the procedure of line clipping.
10. Differentiate parallel projection and perspective projection.

**II Answer any five of the following 5\*6=30**

1. Describe the functionalities of Refresh cathode Ray tube with suitable diagram.
2. Explain the working of DDA line Drawing Algorithm.
3. Explain briefly Scan Line Algorithm.
4. Consider a polygon with 4 coordinate points (0,0) (4,0) (2,3) (2,1) with rotation angle 15 degree.
5. Discuss in brief about Window to View port transformation.
6. Mention the different properties of curve.
7. Discuss in brief about Homogenous Coordinate.

**III Answer any two of the following 2\* 10=20**

1. a) Differentiate between Raster Scan and Random Scan (5)

b) Explain Beam penetration method (5)

 19. Demonstrate how to clip the following polygon using Sutherland – Hodge man polygon Clipping Algorithms.



 20. Discuss the various Geometric transformations in 3D graphics.