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

DATE:24-04-2017

**VI Semester Examination, April 2017**

**B.Sc Computer Science**

**CS 6212: Computer Graphics**

**Time 3Hrs Max Marks 100**

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

**(*For supplementary candidates only)***

***Attach this question paper with the answer script***

**PART-A**

**Answer all TEN questions 3 x10 = 30**

1. List the application of computer graphics.
2. What is meant by interactive and non interactive graphics?
3. Define Aspect ratio and Resolution.
4. What is perspective projection?
5. What is reflection?
6. Give the matrix representation for 3D rotation.
7. Write a general equation for 2D translation.
8. Define color model and clipping.
9. Write a note on light pen.
10. Write any four characteristics of depth buffer method.

**PART-B**

**Answer any FIVE questions 8 x5 = 40**

1. Explain about Raster scan system.
2. Describe DDA line drawing algorithm.
3. Write in detail about CRT Display.
4. How to converts window coordinates into viewport coordinates?
5. Calculate pixel positions along straight line AB having end points A(5,5) and B(13,9)using Bresenhen’s line drawing algorithm.
6. Explain Shadow Mask Method with a suitable diagram.
7. What is Transformation? Explain the five types of Transformation in detail.

**PART-C**

**Answer any THREE questions 10 x3 = 30**

1. Explain the components of Interactive Graphics Display.
2. What is Clipping? Explain any two types of Clipping.
3. Describe Cohen-Southerland algorithm for line clipping.
4. Explain DDA line drawing algorithm with a suitable example.
5. Explain any three 3D transformation techniques in detail along with the transformation matrix and equation. CS-6212-A-17