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| Register Number:  **Date: 29-04-2019** |

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

**BSc – VI SEMESTER**

**SEMESTER EXAMINATION APRIL-2019**

**CS 6215 – Computer Graphics**

**Time – 2 ½ hrs MaxMarks-70**

**PART A**

**I Answer the following question 2\*10=20**

1. List any two differences between random scan and raster scan.
2. Write the advantages of DDA line algorithm over Bresenham’s line algorithm.
3. List the different type of line.
4. List the different types of two dimensional transformation.
5. Write the metric’s notation for composite translation and composite rotation.
6. What is three dimensional transformation?
7. What is clipping? Give one example.
8. Differentiate MOUSE and trackball.
9. What is projection? Give one example.
10. What is quardtree and octree?

**PART B**

**II Answer any FIVE question 6\*5=30**

1. Explain RGB color model.
2. Explain the working of boundary fill algorithm.
3. Write an algorithm to demonstrate the working of bresenham’s circle.
4. Explain homogenous co-ordinate system.
5. For the triangle A(150,100), B(150,400) C(250,350)
6. Perform rotation 900.
7. Perform scaling, where scaling factor of X=-2, Y=0.5.
8. How window to viewport transformation is carried out?
9. Explain Z buffer algorithm for hidden surface.

**PART C**

**III Answer any TWO question 2\*10=20**

1. Explain the working of CRT in details..
2. Explain three dimensional transformations.
3. A) Explain the steps involved in cohensutherland line clipping algorithm.

B) Short note on keyboard and joystick.

**CS 6215\_A\_19**