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| Register Number:  Date: |



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

**BSc – VI SEMESTER**

**SEMESTER EXAMINATION APRIL-2022**

(Examination conducted in July 2022)

**CS 6218 - Computer Graphics and Multimedia**

**Time – 2 ½ hrs. MaxMarks-70**

**The Question paper has one printed page**

**PART A**

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

1. Write the techniques for producing color display with a CRT?
2. Expand pixel. List any one advantage of using pixel.
3. Define transformation. Give the matrix representation of shearing.
4. Compare and contrast window and view port.
5. What is translation? Give the matrix representation of translation.
6. Define clipping. List the type of clipping.
7. List the difference between quadtree and octrees.
8. What is multimedia? List any two application of multimedia.
9. Define digitization. List any one process used to digitize data.
10. Expand JPEG and MPEG.

**PART B**

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

1. What is the difference between random and raster scan?
2. Explain the steps involved in Cohen Sutherland line clipping Algorithm.
3. Write the mathematical derivation of Window to Viewport transformation.
4. With a neat diagram explain the working of PCM audio.
5. Explain the content of multimedia database design.
6. List the difference between video and audio standard.
7. Compare and contrast parallel and Perspective Projections.

**PART C**

**III Answer any two questions 2\*10 = 20**

1. Write an algorithm to explain the working Bresenham's line algorithm. Illustrate the working of Bresenham's line algorithm with the following example Starting and Ending position of the line are (1, 1) and (8, 5). Find intermediate points.
2. Give the difference between two dimensional and three dimensional transformations.
3. Explain multimedia architecture in detail.