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| Register Number:  Date:04-03-2022 |



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

**BCA – V SEMESTER**

SEMESTER EXAMINATION: OCTOBER 2021

(Examination conducted in January-March 2022)

**CA 5318 - Computer Graphics and Multimedia**

**Time – 2 ½ hrs MaxMarks-70**

**PART A**

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

1. What is computer Graphics and mention any two advantages?
2. Expand CRT and mention its types.
3. Calculate the Aspect ratio and Resolution with width 16 inches and height 14 inches?
4. What is pixel? Expand pixel.
5. Differentiate between DDA and Bresenham’s line algorithm
6. What for decision parameter is used in Bresenham’s line algorithm.
7. Write the 2 x 2 matrix representation for translation and scaling.
8. List the difference between parallel and perspective projections.
9. Define multimedia system. List any 2 component of multimedia.
10. What is Animation, Indicate any two animation techniques.

**PART B**

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

11)List the difference between random and raster scan systems.

12)Explain Cohen Sutherland line clipping Algorithm and if point P1 lies at region 0100 and p2 lies at 1101,whether the line is visible , not visible or clipping case.

13)Write an algorithm to demonstrate the working of boundary fill.

14)With neat diagram explain the steps involved in window to view port transformation.

15)Write the difference between lossy and lossless compression.

16)List the difference between video and audio standard.

17)Explain the working of Z buffer algorithm.

**PART C**

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

18.a. Explain Cathode ray tube with a neat diagram. (7+3)

b. How DVST is different from CRT.

19.Write a program to demonstrate the working of midpoint circle drawing algorithm. Plot 6 points of circle using this Algorithm. When radius of circle is 10 units. The circle has centre (50, 50).

1. a) Explain two dimensional composite translation and scaling. (5+5)

b) Write a program to illustrate the working of concentric circle using composite rotation.