



Register Number:

Date: 23-11-2020

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE -27
B.C.A V SEMESTER
SEMESTER EXAMINATION NOVEMBER 2020
CA 5318 – COMPUTER GRAPHICS AND MULTIMEDIA

Time – 2.5 hours

Max Marks-70

This paper Contains two printed papers and 3 sections

SECTION A

I. Answer all the following

2*10= 20

1. How is Raster scan system different from Random scan system.
2. What is Graphics software and what are the primary categories of graphics?
3. List any four characteristics of a line.
4. Differentiate DDA and Bresenham's Line algorithm
5. Define Transformation? What are the basic geometric transformations in computer Graphics.
6. Consider a polygon with 4 coordinates points (0,0)(4,0)(2,3)(2,1) with a scaling factor (sx , sy) as (0.5,0.7), find out the new coordinates.
7. Distinguish between window and viewport.
8. How is curve clipping performed.
9. What is Z buffer algorithm used for and give one application?
10. Write any three applications of Virtual reality.

SECTION B

II. Answer any five of the following

6*5= 30

11. Discuss the working of shadow mask CRT method.
12. Digitize a line with endpoints (9,18) and (14,22) using Bresenham Line Algorithm
13. Write a program for boundary fill with 4 connected pixel.
14. Given a triangle with corner coordinates (0, 0), (1, 0) and (1, 1). Rotate the triangle by 90 degree anticlockwise direction and find out the new coordinates.
15. Explain the concept of clipping and operations performed on clipping.
16. Explain Scan line method for multiple surfaces.
17. Write a short note on spatial and Temporal redundancy?