

BCA 403

B.C.A. (PART-II) EXAMINATION, 2024-25

(Fourth Semester)

Paper : III

Computer Graphics



Time : Three Hours]

[Maximum Marks

- Note: (i) Answer **Five** Questions in all.
(ii) Question No. 1 is Compulsory.
(iii) Answer remaining **four** questions, selecting **two** questions from each Section **A** and **B**.
(iv) All questions carry equal marks.
1. Answer all part of the following :
- (a) Define pixel and resolution.
 - (b) State any two graphics functions with its syntax.
 - (c) State the concept of Vanishing point.
 - (d) Give the matrix representation for 2D Scaling

Section-A

2. What is Raster scan display system? Explain about working of the raster scan display system for displaying colour objects.
3. What is concept of Line Drawing by Incremental methods? Consider the line from (5, 5) to (15, 10). Use the DDA algorithm to draw this line.

4. What is clipping? What are their types? Write algorithm to clip line using Cohen Sutherland line clipping algorithm.
5. What is geometrical transformation? Explain the basic geometrical transformations.

Section-B

6. Differentiate between the following :
 - (a) RGB color and CMYK color model.
 - (b) Active and Passive Graphic Devices.
7. (a) Derive the expression for decision parameter used in Bresenham's Circle algorithm.
(b) Briefly explain the Scan line conversion algorithm for Polygon Filling?
8. (a) Why we need to normalize coordinates for performing composite transformations?
(b) How do we obtain various types of perspective projection of an object?
9. Write notes on any two of the following :
 - (a) Computer graphics software
 - (b) Composite transformation
 - (c) View reference point

