

C

(Printed Pages 4)

Roll No. \_\_\_\_\_

**25/1663**

**B.C.A. (Fourth Semester)**

**Examination, 2025**

**Paper : First**

**(Computer Graphics & Multimedia  
Application)**

*Time : Two Hours ]*

*[ Maximum Marks : 75*

**Note :** Attempt all sections as per instructions.

**Section-A**

**( Very Short Answer Type Questions)**

**Note :** Attempt all **5 (five)** questions. Each question carries **2(two)** marks and the answer of each question should not exceed 50 words.  $5 \times 2 = 10$

1. Write short notes of the following:

**P.T.O.**

**25/1663**

- (i) What do you mean by Resolution in Computer graphics?
- (ii) What is Scan Conversion and why it is needed?
- (iii) What is Projection.
- (iv) Explain Homogeneous Coordinates.
- (v) What is Bezier Curve?

**Section-B**

**(Short Answer Type Questions)**

**Note :** Attempt any **5 (five)** question out of total **8 (eight)** question. Each question carries **5 (five)** marks and answer of each question should not exceed 100 words.  $5 \times 5 = 25$

2. (i) Explain the DDA line generating algorithm.

- (ii) Differentiate between impact printer and non-impact printer.
- (iii) What is 2D Scaling and its scaling matrix?
- (iv) Consider a window boundary by the line  $X=20$ ,  $Y=0$ ,  $X=5$ , and  $Y=3$ . The line segment joining  $(-1, 0)$  and  $(4, 5)$ , if clipping against the window will connect the points. Find the clipped points.
- (v) Differentiate between Window and Viewport.
- (vi) What is Dream Weaver? Explain its applications.
- (vii) Define multimedia. What are the different types of multimedia.
- (viii) Discuss Computer graphics and its types.

## Section-C

## (Long Answer Type Questions)

**Note :** Attempt any **2 (two)** out of **4 (four)** questions. Each question carries **20 (twenty)** marks and the answer of each question should not exceed 400 words.

$$2 \times 20 = 40$$

3. (i) Explain Scan Conversion Circle, and write Bresenham's Circle Drawing Algorithm.
- (ii) Explain CRT and its components in detail.
- (iii) Explain Cohen-Sutherland line clipping algorithm.
- (iv) Write about Multimedia Highway and CD-ROM in detail.