

A  
(20623)  
BCA-IV Sem.

Printed Pages : 3  
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**Section-B**

**(Short Answer Questions)**

**Note :** Attempt any **two** questions.  $2 \times 7\frac{1}{2} = 15$

6. Digitize a line from (10,12) to (15, 15) on a raster screen using Bresenham's straight line Algorithm. What are the various line drawing algorithms?  $7\frac{1}{2}$
7. Calculate the pixel location approximating the first octant of a circle having centre at (4, 5) and radius 4 units using Bresenham's algorithm.  $7\frac{1}{2}$
8. Explain the following composite transformations  
(i) Translation (ii) Rotation.  $7\frac{1}{2}$

**Section-C**

**(Detailed Answer Questions)**

**Note :** Attempt any **three** questions.  $3 \times 15 = 45$

9. What is multimedia? Explain the objects involved in Multimedia system and describe various applications.  $15$
10. Explain the following:  $15$ 
  - (a) Cubic curves
  - (b) Quadric surface
  - (c) Computer Animation

**18016**

**B.C.A. Examination, June-2023**

**COMPUTER GRAPHICS AND MULTIMEDIA  
APPLICATION**

**[BCA-401]**

*Time: 3 Hours]*

*[Maximum Marks : 75*

**Note :** Attempt questions from **all** Sections as per instructions.

**Section-A**

**(Very Short Answer Questions)**

**Note :** Attempt **all** the five questions. Each question carries 3 marks. Very short answer is required not exceeding 75 words.

1. Define convex and concave polygon.  $3$
2. List any four areas of applications of computer graphics.  $3$
3. State the concept of vanishing point.  $3$
4. Define refresh/frame buffer.  $3$
5. What are the video display devices?  $3$

**18016**

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11. Find a transformation of triangle A (1, 0), B (0, 1), C (1, 1) by.
- (a) Rotating  $45^\circ$  about the origin and then translating one unit in X and Y direction.
  - (b) Translating one unit in X and Y direction and then rotating  $45^\circ$  about the origin. 15
12. What is transformation? What are the steps involved in 3D transformation. Explain with examples. 15
13. Write about Cohen-Sutherland line clipping algorithm with an example. 15