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BCA-IV Sem.

Printed Pages : 3

Roll No. ....

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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

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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 Bresenhams 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 tranformations (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. https://www.ccsustudy.com   15

10. Explain the following :   15
    (a) Cubic curves
    (b) Quadric surface
    (c) Computer Animation

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11. Find a transformation of triangle A (1, 0), B (0, 1), C (1, 1) by.

    (a) Rotating 45° 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° 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

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