A

(20623)

BCA-IV Sem.

Printed Pages : 3

Roll No. .....

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

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Section–B

(Short Answer Questions)

Note : Attempt any **two** questions. 2×7½=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 ? 7½

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. 7½

8. Explain the following composite tranformations (i) Translation (ii) Rotation. 7½

Section–C

(Detailed Answer Questions)

Note : Attempt any **three** questions. 3×15=45

9. What is multimedia ? Explain the objects involved in Multimedia system and describe various applications. 15

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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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