BCA 5th Semester (Re-appear)
Examination, May–2023
COMPUTER GRAPHICS
Paper– BCA-302

Time allowed : 3 hours] *[Maximum marks : 80*

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination

Note: *Attempt **five** questions in all, selecting **one** question from each unit. **Question no. 1 is compulsory.** All questions carry equal marks.*

1. (a) Name the techniques used for color display .

   (b) In what way interactive graphics differ from passive graphics

   (c) Define view port and clipping

   (d) What are homogeneous coordinates

   (e) What is quadric surface

   (d) What is Bezier surface

   (g) What is view volume

   (h) What are the projection anomalies?

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Unit–I

2. (a) Compare random scan CRT and raster scan CRT.

(b) Explain Bresenham's line drawing algorithm

3. (a) What is computer graphics? Explain the application area of computer graphics

(b) Write and explain boundary filled algorithm

Unit–II

4. Write and explain cohen-Sutheredland algorithm for line and polygon clipping

5. (a) Find the new coordinates of the triangle A(0, 0), B(1, 1), C(5, 2) after it has been magnified to twice its size

(b) Explain:

(i) shear transformations

(ii) composite transform

(iii) Viewing pipeline

Unit–III

6. (a) What are polygon rendering methods? Explain

(b) Obtain expression for Bezier curve and B-spline curve

Discuss various basic illumination models

Unit–IV

8. What do you mean by projection? Describe different types of projection with examples.

9. Explain the following 3-D Transformations with example:-

(i) Rotation

(ii) Scaling

(iii) Shear transformation

(iv) Composite transformation

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