Roll No. : .....

Total No. of Questions : **9**] [Total No. of Pages : **3**

97678

BCA 5th Semester (New)
(Full & Reappear)
Examination, March-2021

COMPUTER GRAPHICS

Paper-BCA-302

*Time : **Three** Hours]* *[Maximum Marks : **80***

Before answering the questions, 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) Explain overview of Graphics Systems.

   (b) Define Output Primitives.

   (c) Explain Co-ordinate Transformations.

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(d) Explain Reflection Transformation in 2-D Transformations.

(e) Define Emissive Devices.

(f) Define persistence in CRT.

(g) Explain Uniform B-spline Curve.

(h) Explain Scaling Transformation in 3-D Transformations. 2×8=16

Unit–I

2. (a) Define Video Display Devices.

(b) Differentiate between Raster Scan and Random Scan Systems.

3. (a) Explain Mid-point Circle Algorithm.

(b) Explain Scan Line Polygon Fill Algorithm. 16

Unit–II

4. What are two dimensional transformations? Explain how transformations are represented in matrix ?

5. Define Cyrus-beck line clipping algorithm. Explain its advantages and disadvantages over Cohen-Sutherland algorithm. 16

Unit–III

6. Write short notes on the following :

(a) Hermite Curve

(b) Bezier and B-Spline Surfaces

7. Define the various Polygon-rendering Methods. Explain in detail. 16

Unit–IV

8. Explain Translation, Shearing and Rotation in three dimensional transformations. How these transformations produce effects to the graphics objects ?

9. What is Viewing Pipeline ? How viewing operation is performed in 3-D Geometry ? 16

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