97678

BCA 5th Semester (New) Examination-November, 2014

COMPUTER GRAPHICS

Paper: BCA-302

Time: 3 hours

Max. 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 the examination.

- **Note:** Attempt **five** questions. Question No. 1 is **compulsory**. Select **one** question from each unit.
- 1. Explain the following:

16

- (i) Application areas of computer graphics
- (ii) The viewing pipeline in 2-D viewing
- (iii) Bezier Curve
- (iv) The viewing pipeline in 3-D viewing

UNIT - I

2.	(i)	What do you mean by Random Scan and
		Raster Scan Systems. Also differentiate
		between them.

- (ii) Give a brief idea about color CRT Monitors.
- 3. (i) What do you mean by Boundary Fill and Flood ill algorithm? Also differentiate between them.
 - (ii) Explain Bresenham's Circle algorithm in detail.

UNIT - II

- **4.** What do you mean by 2D Geometric Transformations? Also explain:
 - (i) Translation
 - (ii) Rotation

	(iii) Scaling
	(iv) Reflection and Shear Transformations.
	16
5.	(i) Give a brief idea about window to view port coordinate transformations.
	•
	(ii) What is clipping? Explain the
	Sutherland Hodgeman Polygon clipping
	algorithm in detail.
	UNIT – III
б.	Explain the following: 16
	(i) Quadric Surfaces
	(ii) B-Spline Curves
	(iii) Hermite Curve
7.	Explain in detail the basic illumination

models.

16

UNIT - IV

6. Describe the following	8.	Describe	the	following	
---------------------------	----	----------	-----	-----------	--

- (a) Composite Transformations in 3D geometric Transformations.
- (b) Reflection and shear Transformations in3-D geometric Transformations.8
- 9. Write short notes on:
 - (i) Viewing Coordinates
 - (ii) General Projection Transform 16