Roll No. .....

97678

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

COMPUTER GRAPHICS

Paper : BCA-302

Time : 3 hours ***Max. Marks : 30***

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. 8

(ii) Give a brief idea about color CRT Monitors. 8

3. (i) What do you mean by Boundary Fill and Flood ill algorithm ? Also differentiate between them. 8

(ii) Explain Bresenham's Circle algorithm in detail. 8

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. 8

(ii) What is clipping ? Explain the Sutherland Hodgeman Polygon clipping algorithm in detail. 8

UNIT – III

6. 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

8. Describe the following :

(a) Composite Transformations in 3D geometric Transformations. 8

(b) Reflection and shear Transformations in 3-D geometric Transformations. 8

9. Write short notes on :

(i) Viewing Coordinates

(ii) General Projection Transform 16
