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**IT - 602**

**B.E. VI Semester**

Examination, June 2015

## Computer Graphics and Multimedia

*Time : Three Hours*

*Maximum Marks : 70*

*Note:* i)  Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

### Unit-I

1. a)  What is a Computer Graphics? Explain.
   b)  Write Beam Penetration Method.
   c)  Explain the working principle of Joystick.
   d)  Explain the working Cathode Ray Tube?

   OR

   Why shadow mask used in graphics Monitors? How VGA Monitor different from SVGA Monitors?

### Unit-II

2. a)  Give difference between DDA and Bresenham's line algorithm.
   b)  Explain B spline Curve in detail.
   c)  Find the points lying on the circle centered at (5,10) having radius 8 using Bresenham's circle Algorithm.

   d)  Determine the Bezier blending function for five control points. Plot each function and label the maximum and minimum values.

   OR

   Why filling algorithms used? Explain Boundary and Flood fill algorithm.

### Unit-III

3. a)  Explain Composite transformation in three dimension.
   b)  Explain RGB and HSV color models.
   c)  A triangle having vertex at A(0,0),B(5,5),and C(10,4). Find the transform matrix for rotation of 45 degree about origin.
   d)  Find the standard perspective projection of a point in the plane X = 25 where center of projection at (0, 0, 0).

   OR

   Why are homogeneous coordinate system used for transformation computation in computer graphics?

### Unit-IV

4. a)  Explain MIDI File Format.
   b)  Define Sampling and quantization.
   c)  Describe the architecture of a multimedia System.
   d)  Discuss about card, icon and page based authoring tools.

   OR

   What is multimedia transmission protocol? Explain their role in transmission.

### Unit-V

5. a)  What is Animation? Explain.
   b)  What are the steps for image compression?
   c)  Explain image editing plug-ins.
   d)  Discuss the JPEG and MPEG File format standards.

   OR

   What are different multimedia databases used for storing of images? Also explain its architecture.

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