Roll No. .........................

# IT-602

## B. E. (Sixth Semester) EXAMINATION, June, 2012

### (Information Technology Engg. Branch)

COMPUTER GRAPHICS AND MULTIMEDIA

(IT – 602)

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 35*

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) Explain the working principle of shadow mask circuit with the help of a neat labelled diagram.     10

   (b) Differentiate between Random and Raster scan monitors.     10

*Or*

2. (a) Explain the rubber band and positioning techniques.     10

   (b) Explain the working principle of scanners and joysticks.     10

3. (a) What steps are required to plot a line whose slope is between 0° and 45° using Bresenham's method.     10

   (b) Explain circle drawing using symmetric DDA algorithm.     10

*Or*

4. (a) Find equation of Bezier curve which passes through points' (0, 0) and (– 2, 1) and is controlled through points (7, 5) and (2, 0).                    10

   (b) Explain the properties of B-spline curve.        10

5. Find out the co-ordinates of a figure bounded by (0, 0), (1, 5), (6, 3), (– 3, – 4) when reflected along the line whose equation is $y = 2x + 4$ and sheared by 2 units in $x$ direction and 2 units in $y$ direction.                    20

*Or*

6. (a) Differentiate between Phong and Gourand shading.  10

   (b) Explain the midpoint subdivision line clipping algorithm.                    10

7. (a) Write short notes on the following :        10

   (i)   SCSI and MCI

   (ii)  Components of multimedia

   (b) Draw and explain the multimedia workstation architecture.                    10

*Or*

8. (a) Write a note on evolving technologies for multimedia systems.                    10

   (b) Discuss the key issues of data organization for multimedia system.                    10

9. (a) Draw and explain the block diagram of data compression scheme.                    10

   (b) Explain the working principle of MPEG.        10

*Or*

10. (a) Discuss the video processing standards used in multimedia systems. 10

   (b) What are the important measures that should convey spatial and temporal content of the scene in visual representation ? 10