



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/M.TECH(MCSE)/SEM-3/PGCS-302/2012-13**

# 2012

## MULTIMEDIA AND GRAPHICS

*Time Allotted : 3 Hours*

*Full Marks : 70*

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

Answer *all* questions.

1.
  - a) Explain Bresenham's circle drawing algorithm. 6
  - b) Scan convert a line from ( 0, 0 ) to ( - 8, - 4 ) using general Bresenham's algorithm. 4
  - c) Write short note on "Generalised clipping". 4
2. Explain the following :
  - a) Painter's algorithm 5
  - b) Warnock's algorithm 5
  - c) Multiple clipping. 4



3. a) What are the advantages of B-splines over Bezier curves ? 5
- b) What are the differences between interpolation and approximation in spline representation ? 5
- c) Give the application of raster scan graphics. 4
4. a) Given vertices of Bezier  $B_0 [ 0, 0 ]$ ,  $B_1 [ 1, 2 ]$ ,  $B_2 [ 3, 2 ]$ ,  $B_3 [ 2, 0 ]$ , find out on Bezier curve at  $t ( 0.15, 0.4, 0.75 )$ . 5
- b) Perform a  $45^\circ$  rotation of triangle  $A ( 0, 0 )$ ,  $B ( 1, 1 )$ ,  $C ( 5, 2 )$ . 5
- c) Briefly discuss about chromaticity diagram. 4
5. Write short notes on any *four* of the following :  $4 \times 3 \frac{1}{2}$ 
  - a) JPEG and MPEG file formats
  - b) Animation Technique
  - c) Raster display system architecture
  - d) Fractals and their application
  - e) Graphic plotters.

