May-2004

Bachelor of Computer Application (BCA) Examination

VI Semester

# Computer Graphics and Multimedia

Time 3 Hours] [Max. Marks 50

**Note :** *Attempt all five questons.*

1. (a) Explain working principles of Raster Scan Monitor. Calculate the size of video memory for a monitor having 800 x 600 resolution supporting 24 bit color.
   (b) Explain working of Plasma Panel display device. Mention its advantages over CRT monitor.
2. (a) Write Bresenham's circle algorithm and calculate 4 pixel coordinates in one octant for given radius r = 10.
   (b) Write scan generation polygon filling algorithm.
3. (a) Write series of transformation matrices to rotate a point P (30, 40, 50) abut y-axis by 30 degree clockwise. Also calculate new position of point P.
   (b) Mention the utility of 4 bit region code used in Cohen-Sutherland line clipping algorithm.
4. (a) Define multimedia system. Mention its applications.
   (b) Define following terms in digital audio :
   sampling rate, MIDI, audio file formats.
5. (a) Explain principle of animation. Write sequence of steps for animation creation.
   (b) Write salient features of MPEG video standard.
6. (a) Explain working principles of following devices :
   (i) Laser Printer (ii) Mouse,
   (b) Describe important features of PAL broadcast video standard.
7. (a) Explain various 3D modelling techniques.
   (b) Explain following terms :
   color palate, image file formats.
8. Write short notes on : (any two)
   (a) Video Editing Options (b) Antialising
   (c) Video Capture Board (d) Segment Table
   (e) Window-to-Viewport Transformation.

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