June 2016

Bachelor of Computer Application (BCA) Examination

VI Semester

Computer Graphics and multimedia

Time 3 Hours] [Max. Marks 50

Note : Attempt any two parts from each question. All questions carry equal marks.

1. (a) Consider three different raster systems with resolutions of 640 × 480, 1280 × 1024 and 2560 × 2048. What is the size of frame buffer (in bytes) for each of these systems to store 12 bits per pixel ?
   (b) Define the following terms :
   (i) Pixel (ii) Resolution
   (iii) Persistence (iv) Aspect Ratio.
   (c) Write merits and demerits of plasma panel display.
2. (a) Write down and explain mid-point circle drawing algorithm.
   (b) Digitize the line with end-points (10, 12) and (20, 18) using DDA line drawing algorithm.
   (c) Explain 2D scaling and reflection using example.
3. (a) Explain 3D basic transformation with an example.
   (b) Explain Sutherland-Hadgeman polygon clipping algorithm.
   (c) What is segment table ? How is it created and deleted ?
4. (a) Explain different audio file formats used in multimedia.
   (b) Explain MPEG file format in detail.
   (c) Explain cell animation and morphing with respect to animations.
5. (a) Discuss NTSC and PAL video broadcasting, standards.
   (b) what is video compression ? Wrlte its advantages.
   (c) Explain any five input devices.

□□□