MCA/D06
Computer Graphics and Multimedia
MCA -501

Time : 3 Hours   MM:50
Note:- Attempt any Five questions . All questions carry equal marks.

1   Write down the algorithm and find the expression for the line-length estimates employed by:
        (a)   The Symmetrical DDA
        (b)   The Simple DDA
        Suggest other line-length estimates that are simple to compute and more accurate than DDA estimates.

2   Write down a technical note on the following:
        (a)   Plasma Panel
        (b)   Image Scanner

    1   Prove the assertion that transformation of a line between 2 points A and B is equivalent to the line between the transform of A and transform of B. Consider the translation, rotation and scaling.
    2   Write down the program for the line-clipping using Sutherland-cohen algorithm. Also explain its working. You can choose any language known to you.
    3   What are the steps involved in generating perspective view of an object? Write an algorithm to obtain perspective view if a rectangular solid.
    4   Discuss the following algorithms:
            (a)   Mid Point Subdivision Algorithm
            (b)   Polygon Clipping Algorithm

7   Define Multimedia? Discuss its application. Show how multimedia is used by the advertisement agency.
8   Elaborate in detail the various primitive categories available in GKS. How it can be made more attractive?

9(a)   Write down the Hidden Surface Removal algorithm alongwith is limitations.
 (b)   Write down the Bresenham's Circle Drawing algorithm.

10   Write notes on the following:
        (a)   Gouraud Shading
        (b)   Phong Shading