

**Computer Graphics**  
**(IT-6, DEC-05)**

**Note:** Attempt any five questions.

1. a) Explain the point plotting technique in detail.  
b) What are the steps required to plot a line whose slope is between  $0^\circ$  and  $45^\circ$  using Bresenham's method?
2. a) Explain the characteristics of light pen.  
b) Explain the refresh line drawing display.
3. a) State and explain a point clipping method.  
b) State the Cohen-Sutherland line clipping algorithm.
4. a) Derive the general form of the matrix for rotation about a point  $P(h, k)$ .  
b) What are the applications of raster scan graphics?
5. a) State the characteristics of quadratic Bezier Curves. Also explain how they can be used to construct curved surfaces.  
b) Why are the hidden surface removal algorithms needed?
6. Explain the scan line coherence algorithm in detail.
7. Explain the solid area scan conversion with example.
8. Write short notes on the following topics:-
  - a) Device dependent Graphics System.
  - b) View planes.

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