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BT-6 / M-18

COMPUTER GRAPHICS

Paper–IT–356

Time allowed : 3 hours] *[Maximum marks : 100*

Note :- *Attempt five questions in all selecting at least one question from each unit. All questions carry equal marks.*

Unit–I

1. (a) Explain the working of following color display techniques:
(i) Beam penetration CRT
(ii) Shadow mask CRT

(b) Write and explain the Bresenhem's circle drawing algorithm.

2. (a) Compare and contrast the CRT and plasma panel display device. Also highlight the merits and demerits of each display system.

(b) What is the difference between simple DDA and symmetrical DDA? Explain using suitable example.

Unit–II

3. (a) What do you understand by clipping? Explain the midpoint subdivision algorithm for clipping.

(b) Explain the Sutherland-Hodgeman polygon clipping algorithm.

4. Write Liang-Barsky algorithm for line clipping and compare its efficiency with Cohen-Sutherland line clipping algorithm.

Unit–III

5. What do you understand by transformation? Prove the assertion that the transformation of a line between two points A and B is equivalent to the line between the transform of A and transform of B. Consider only the scaling, rotation, and translation transformations.

6. What is the difference between orthographic projection and oblique projection? Explain.

Unit- IV

7. What is Bezier curve? Also specify the properties of Bezier curves.

8. What do you understand by hidden surface elimination? Explain the depth-buffer algorithm for hidden surface elimination. Also discuss the limitations of depth-buffer algorithm.