

COMPUTER GRAPHICS

(Information Technology)

Time: 3 Hours

Max. Marks: 70

Answer any FIVE Questions

All Questions carry equal marks

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1. (a) What is half-toning? Distinguish between anti-aliasing and half-toning.
(b) How the size of frame buffer and resolution are related?

2. Explain the algorithm for line clipping by Cohen-Sutherland algorithm. Demonstrate with an example are the three cases of lines.

3. (a) What is shearing? Differentiate between x-shear and y-shear.
(b) Give the matrix representations and homogeneous coordinates for all the cases in reflection.

4. (a) Write down the procedure for opening and closing structures.
(b) What is a display traversal? Explain the posting structures for display structures.

5. (a) Derive 3D plane surface equation.
(b) Write notes on different representations of a polygon mesh.

6. What are the methods to represent a solid object in computer graphics? Explain them in detail.

7. Write short notes on,
(a) Half-toning
(b) CSG models.

8. (a) Explain the visible surface ray tracing.
(b) Describe the technique of color interpolation shading. How does it differ from Phong shading?