R09

Time: 3 Hours   Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

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1.a) Explain in detail about the organization of raster scan systems.
  b) Discuss the role of stereoscope and virtual-reality systems in representing 3D objects.   [7+8]

2.a) Explain how to draw a line using Bresenham's line drawing algorithm.
  b) Using Bresenham's line drawing algorithm draws a line with the end points (8, 4) and (15, 10) has a slope of 0.8.   [7+8]

3.a) Write about Reflection and shearing in 2D transformations.
  b) Explain how to perform general pivot-point rotation and general fixed-point scaling.   [7+8]

4.a) Define Window and Viewport. Write in detail about Window-to-Viewport transformation.
  b) Discuss in detail how to clip lines using Cohen-Sutherland Line Clipping algorithm.   [7+8]

5.a) What is a Spline? Explain clearly about representing the Spline in Computer Graphics.
  b) Give elaborate description on any two polygon-rendering methods.   [7+8]

6.a) Explain 3D rotation about an axis that is not parallel to the coordinate axis.
  b) Discuss how to setup a view volume using the window boundaries for parallel and perspective projections.   [7+8]

7.   Write about any two image-space methods that are used to deal with visible-surface detection.   [15]

8.a) Explain the term Computer Animation in general and also discuss the design of animation sequences.
  b) Write about Raster Animations and Computer-Animation languages.   [7+8]

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