NOTE: 1. All questions are compulsory.
2. Draw a neat and labelled diagram.
3. Figure to right indicate full marks.

Q1] Attempt any two questions. [10]

1. Differentiate between bitmap images and vector images.
2. State and explain the Bresenham's Line Drawing Algorithm.
3. Write a short note on flat panel display
4. State and explain different types of Input Technology.

Q2] Attempt any two questions. [10]

1. Explain the concept of 2D homogeneous shear transformation.
2. Explain the concept of 2D homogeneous scaling transformation.
3. Write a short note on Rotation about an arbitrary point.
4. Derive the transformation matrix of rotation for anticlockwise direction.

Q3] Attempt any two questions. [10]

1. Write a short note on world coordinates and viewing coordinates in 3D transformation.
2. Explain the concept of 3D homogeneous reflection transformation.
3. Write a short note on Perspective projection.
4. Write a short note on orthographic projection.

Q4] Attempt any two questions. [10]

1. Write a short note on polygon clipping.
2. Write a short note on Inside-Outside Test.
3. Write a short note on Winding Number Test
4. Write a short note on text filling.

Q5] Attempt any two questions. [10]

1. Write a short note on coherence for Visibility.
2. Write a short note on properties of Bezier Curves.
3. What do you mean by concept of Z-buffer algorithm?
4. Write a short note on ruled surfaces

Q6] Attempt any two questions. [10]

1. Write a short note on raster animation.
2. Write a short note on color models.
3. Write a short note on object rendering.
4. Write a short note on Morphing.

Q7] Attempt any three questions. [15]

1. State the application of Computer Graphics.
2. Rotate a triangle ABC by and angle 90 degree about a point (-1, 1) where the triangle has the coordinates A(5,0),B(10,2) and C(7,4) in 2D Transformation.
3. Write a short note on 3D homogeneous Translation and Scaling Transformation.
4. Write a short note on point clipping.
5. Write a short note painter's algorithm.
6. Write a short note on shading.

—— The End ——