UNIT-1

1. What is computing & graphics application of CG?
2. Different between active & passive graphics device?
3. Explain CRT with diagram?
4. Raster scan display?
5. Calligraphic or random scan display?
6. Write a note on techniques for producing color display (Beam penetration& shadow masking).
7. DPA Algorithm.
8. Bresenham line drawing algorithm.
9. Liang-barskyline 'clipping algorithm'.
10. Coben-sutherland line clipping algorithm.
11. Problem with multiple component or weilerathenton algorithm.

UNIT-2

1. Explain 2D transformation with matrix in detail.
2. Explain derivation of rotation with diagram.
3. Rotation about an arbitrally point.
4. Window to view point transformation.
5. Problem of 2D (mostly translate & rotation sum).
6. Explain vanishing points in details.
7. Explain orthographic projection in brief.
8. Problem on 3D (scaling or shearing sum).
9. Parallel & perspective projection.
10. Affine & perspective geometry.

UNIT-3

1. Explain viewing in 3D?
2. Explain different co-ordinate system & metric.
3. Different properties of BRDE.
4. Photometry in detail.
5. Explain colormetry?
6. Explain grassman's law.
7. Chromatic adaptation?
8. RGB color space?
9. Color appearance

UNIT-4

1. Explain Z-buffer algorithm with advantages & disadvantages.
2. Briefly explain pointers algorithm or depth-soft method in detail.
3. Compare all visible surface detection methods.
4. Write a note on Bezier curves in brief.
5. Write a note on B-spline curves.
6. Explain parametric representation of a circle in brief.

UNIT-5

1. Principles of animation.
2. Types of deformation.
3. Explain physical-based animation.
4. Group of objects.
5. Image file formats.
6. Types of compression.
7. JPEG process.
8. Contrast stretching.
9. Smoothing (Average Filtering or mean filtering).