

**I Year II Semester**

**L P C**

**Code: 17CC203**

**4 0 3**

## **COMPUTER GRAPHICS**

### **Unit - I**

Raster scan graphics: Raster scan and random scan architecture, Line drawing algorithms – DDA & Bresenham algorithms, circle generation, general function rasterization, displaying lines, characters and polygons.

Filling algorithms: polygon filling, edge fill algorithm, seed fill algorithm, fundamentals of antialiasing and half toning.

### **Unit - II**

Line CLIPPING: Simple visibility algorithm, Cohen-Sutherland subdivision line clipping algorithm, midpoint sub division algorithm.

Polygon clipping: polygon clipping, reentrant polygon clipping – Sutherland – Hodgeman algorithm, character clipping, 3D- clipping.

### **Unit - III**

Rendering: Hidden line removal algorithms, surface removal algorithms, painters, Warnock, Z- buffer algorithm.

Shading algorithms: Constant intensity algorithm, Phong's shading algorithm, gourand shading algorithm, Comparison of shading algorithms.

### **Unit - IV**

Computer Animation: Design of animation sequence, general computer animation functions, raster animation, computer animation language, key frame system, motion specification.

### **Unit – V**

Introduction to Multimedia: Introduction, multimedia- systems, technology, architecture, trade-offs, contents, PC, Applications, data compressions, authoring system.

Multimedia Authoring Tools: Introduction, Types of authoring tools, Package based- in card authoring tools, Icon based authoring tools, Time based and presentation tools, object oriented authoring tools, author ware professional for windows (APW).

### **TEXT BOOKS:**

- 1.Procedural elements for computer graphics-D.F.Rogers, Tata McGraw-Hill.
- 2.Computer Graphics-Donald Hearn & M.P. Bakers.
- 3.Computer graphics-Harrington.