

# **COMPUTER GRAPHIC**

## **IMPORTANT QUESTIONS**

### **UNIT-1**

1. What is computer graphic. Write its applications.
2. What is CG. Hardware and software
3. Input/output devices used In CG(example LCD, CD, LED, MONITORS)
4. Difference between raster and random scanner
5. What is scan conversion. Explain with the help of example (point, line, circle)
6. What is line and circle algorithm. (Bresenham's, mid point circle)  
[numerical may come from circle and line drawing algorithm.]
7. Name the line drawing algorithm and explain them with example.(Bresenham's, DDA)
8. Difference between DDA and Bresenham's (advantage and disadvantage of DDA and Bresenham's)
9. What is polygon filling algorithm. Explain them (boundary fill and seed fill)

### **UNIT-2**

1. What is transformation (2d and 3d) and its types (1. Coordinate 2. Geometric) explain with the help of example.  
Or,
2. What operations are used in transformation with example rotation translation scaling shearing reflection.(60%numerical, 40% theory)
3. What is clipping and its type explain with the help of example line clipping polygon clipping.  
(ex. Text or curve clipping)  
LINE CLIPPING-(90% numerical) cohan Sutherland, cyrus back, mid point division etc.  
POLYGON CLIPPING-(Sutherland Hodgeman weiler auhertor)
4. What is window to view port mapping(derivation)

### **UNIT-3**

[Note: learn all the operation matrices in 2D and 3D]

1. What is 3D transformation explain with the help of example(80% 3D rotation derivation)
2. What is projection? Explain different types of projections with the help of example.(100 %)
3. Anomalies of projections (schaum's series) (6 marks)
4. What is hidden surface and how we can remove it explain different type of algorithm which are use to remove hidden surface [z-buffer algorithm, pointer's algorithm, scan line, subdivision]

#### **UNIT-4**

1. What is parametric representation of curve?
2. What is curve and its representation ( Explain implicit and parametric)?
3. What is Bezier Curve & its properties ( Explain its blending function)?
4. What is B- Spline curve & its properties?
5. What is difference between B-spline and Bezier curves?
6. What is parametric representation of surfaces?
7. What is interpolation method in CG?
8. What is elimination model and shading model of polygons? (100%) (10 Marks)
9. Write short note on
  - a. Shadows
  - b. Transparency
  - c. image processing