

**B.Tech VI Semester ( Main/ Back ) Examination, May-June 2015**  
**Computer Science**  
**6CS4A Computer Graphics and Multimedia Techniques**

**Time : 3 Hours**

**Maximum Marks : 80**  
**Min. Passing Marks : 24**

**Instructions to Candidates:**

*Attempt any **Five** questions, selecting **one** question from **each** unit. All questions **carry** equal marks. (Schematic diagrams must be shown wherever necessary. any data you feel missing suitably be assumed and stated clearly.) Units of quantities used/ calculated must be stated clearly.*

**UNIT - I**

1. a) What is scan conversion ? Explain Raster Scan system with the help of Block diagram? (8)
- b) Explain Basic principle to draw a circle also Explain mid-point circle Algorithm? (8)

1. a) Write short note on : Anti aliasing technique? (8)
- b) Explain the interactive picture construction technique? (8)

**UNIT - II**

2. a) Explain Cohen-Sutherland line clipping Algorithm with region code details? (8)
- b) What do you mean by homogeneous co-ordinates? How these co-ordinates are useful in transformation? (8)

(OR)

2. a) What is the difference between scaling and Rotation?
- b) Write down flood fill Algorithm for Area filling?

**UNIT - III**

3. a) Explain Depth-Buffer Algorithm to display visible surfaces of polygons
- b) Short - Note on :
  - i) B-Spline curves
  - ii) Bezier Curve

(4)

(OR)

3. a) Explain Scan line Algorithm?
- b) What is perspective representation? Explain various types of perspective projection?

**UNIT - IV**

4. a) Write a short Note on the following
  - i) Gouraud shading
  - ii) Phong shading
  - iii) Ray - Tracing Algorithm
- b) Discuss about the difference between CMY and RGB color?

(4×)

(OR)

4. What are diffused and specular reflection? and write down the illumination model that incorporates both these reflections explain all the variables used in this model

## UNIT - V

5. a) What are Multimedia authoring tools? (8)
- b) Explain the different types of data compression technology? (8)

(OR)

5. Write a short Note on :

- i) Animation techniques [rtuonline.com](http://rtuonline.com)
- ii) Architectural and telecommunication considerations. (8×2=16)