

SE (SEM. IV) (CBSSGS)

COMPUTER GRAPHICS

COMPUTER ENG(A)

DT 12/06/15

**Q.P. Code : 3555**

**(3 Hours)**

**[Total Marks : 80**

N.B.: (1) Question No. 1 is compulsory.

(2) Attempt any three of remaining five questions.

(3) Assume any suitable data if necessary and clearly state it.

1. (a) What are aliasing and antialiasing? Explain any one antialiasing method. [05]  
(b) What are the disadvantages of DDA algorithm? [05]  
(c) What is viewing transformation? [05]  
(d) Define Shearing and give example. [05]
2. (a) Explain the midpoint circle generating algorithm. [08]  
(b) Explain the steps used in rotation of 2-D object about an arbitrary axis and derive the matrices for same. [12]
3. (a) Explain Liang – Barsky line clipping algorithm with suitable example. [10]  
(b) Explain Sutherland – Hodgeman polygon clipping algorithm in detail. [10]
4. (a) What are Parallel and Perspective projections and derive the matrix for perspective projection. [10]  
(b) Explain the properties of Bezier curves. [10]
5. (a) What is the use of Scan Line method and explain all the steps. [10]  
(b) Define Koch curve? How do you construct the Koch curve? [10]
6. Write a short note on any four of the following [20]
  - (a) OpenGL.
  - (b) Area Subdivision method
  - (c) Composite transformation
  - (d) Sweep representations
  - (e) Flood fill algorithm

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