DEERWALK INSTITUE OF TECHNOLOGY			
FINAL EXAMINATION		**SUBJECT**	CSC 254:Computer Graphics
PASS MARK	24	**FULL MARK**	60
TIME	3 Hrs	**DATE**	24th November,2013.

INSTRUCTIONS

- *Do not write anything on the question paper.*
- *Please write your name, roll number and other details very clearly on the front page of the answer sheet.*
- *If you are using multiple answer sheets, ensure that they are safely stapled together.*
- *Any attempt to cheat in any manner will result in automatic expulsion..*
- *If you need any kind of help please raise your hand.*
  Good luck and all the best.

Attempt all the questions. (10 X 6=60)

1. What is random display system? Explain the role of display controller in the raster display system.

2. Derive the expression for midpoint ellipse algorithm. (For region 1 only)

3. Why clipping is used by graphics applications? Explain the polygon clipping procedure with example.

4. Explain the 3D viewing mechanism in the 2D display system using the prospective projection.

5. What do you mean by Geometric Transformation? Derive the expression for the 2D rotation of an object about an arbitrary point.

6. What is spline? Explain the curve generation in computer graphics using Bezier Curve.

7. What are the application areas of the filling algorithms? Describe the flood fill and boundary fill algorithm in detail.

8. Explain in detail about plain equation method. Explain which algorithm is better for hidden surface removal.

OR

Explain in detail about depth buffer method. Justify that is better than plane equation method.

9. Why shedding is required in the computer graphics? Explain in detail about constant intensity shading.

OR

List the different type of shading models. Explain in detail about Gouraud shading model.

10. Calculate the total memory required to store a 10 video in a SVGA system with 24 bit true color and 25 fps.