FACULTY OF SCIENCE
M.Sc. I Semester Examination, May 2006
COMPUTER SCIENCE
Paper 1.5
(Computer Graphics)

Time : 3 *Hours*]   [*Max. Marks* : 100

Answer **all** questions.

Section A – (Marks: 8 × 5 = 40)

1. Write architecture of a Raster-graphics system with a display processor.

2. List some applications appropriate for each of the display Technology.

3. What are line attributes? Explain with examples.

4. What are basic geometric transformations applied to two-dimensional objects?

5. Explain Two-dimensional viewing-coordinate system.

6. Explain Text clipping.

7. Write in brief about Quadraic surfaces.

8. What are main properties of B-spline curves.

Section B – (Marks: 4 × 15 = 60)

9. (a) (i) What are properties of circles.

    (ii) Write Midpoint circle algorithm with an example.

Or

    (b) Write Bresenham's line algorithm and explain for the line with end points (20,10) and (30,18).

10. (a) (i) Write about Homogeneous Co-ordinates.

    (ii) Explain Reflection of an object about x-axis and y-axis.

Or

    (b) (i) Write about composite transformations with example.

    (ii) Explain shear transformations.

11. (a) Write Cohen-Sutherland line clipping algorithm with example.

Or

(b) (i) What are important applications of exterior clipping?

(ii) Explain Weiler Aytherton polygon clipping.

12. (a) (i) Explain various representation schemes for solid objects.

(ii) Discuss x-axis, y-axis, z-axis rotations for three-dimensions.

Or

(b) (i) Explain general perspective-projection transformations.

(ii) Write the properties of Bezier curves.

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