C 48347

SECOND SEMESTER M.Sc. DEGREE EXAMINATION
AUGUST 2008

Computer Science

CS 201—ADVANCED COMPUTER GRAPHICS

(2005 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer any **five** *questions.*
All questions carry equal marks.

1. Describe Raster Scan, Random Scan, DVST monitors.

2. Explain the terms blanking, vertical and horizontal retracing, flickering.

3. Explain the difference between translation, scaling and rotation with figures.

4. Explain the difference between Co-ordinate transformation and Domain transformation with real life examples.

5. Describe different rending techniques for shaded images.

6. Consider the task of determining whether or not a legal solid is the null object. How difficult is it to perform this is each of the representation ?

7. Explain how 3-d curve can be described in a Graphics system.

(5 x 8 = 40 marks)

Part B

Answer any **four** *questions.*
All questions carry equal marks.

8. Find the 3-d transformation matrix to rotate a point about Z axis with respect to (0,0,a).

9. What is perspective projection ? Derive the matrix of standard perspective projection.

10. Discuss the significant of hidden surface removal. Differentiate object and image space methods.

11. List some of the promising applications of Open GL.

12. Explain how virtual-reality systems can be used in design applications.

13. Develop an algorithm to shear an object with respect to any of the three co-ordinate axes, using input values for the shearing parameter.

(4 x 10 = 40 marks)