2006 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

I V B.TECH I I SEMESTER SUPPLEMENTARY EXAMINATIONS
COMPUTER GRAPHICS
(MECHANICAL ENGINEERING,PRODUCTION ENGINEERING)

APRIL/MAY 2006

TIME 3 HOURS
MARKS: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Write short notes on:

(a) Liquid crystal displays

(b) Raster scan display system

2. (a) Explain and demonstrate with suitable examples" the even-odd method"of determining the polygon interior points.

(b) Explain the flood-fill algorithm for filling polygons.

3. (a) Show that 2-D scales and rotations do not commute in general.

(b) What are image transformations? Explain.

4. (a) What is the utility of segments? Explain the use of segment table for organizing information about the segments.

(b) What are the various data structures that are used for storing segments? Comment on their relative merits and demerits.

5. Explain the working of the Sutherland - Hodgeman algorithm for polygonal clipping with the help of suitable example.

6. Explain briefly the transformation steps for obtaining a composite matrix for rotation about an arbitrary axis with the rotation axis projected on to the z-axis

7. (a) Explain the basic conepts of hidden surfaces and line removal methods with suitale examples.

(b) Write about z-buffers.

8. (a) Write about pipeline and parallel front end architecture.

(b) Explain about Bezier curves.