

III B.Tech I Semester Supplementary Examinations, May 2005
COMPUTER GRAPHICS
(Electronics & Communication Engineering)

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. Discuss the construction and functioning of the following input devices:
 - (a) Key board and
 - (b) Mouse
2. (a) Briefly explain about different image compression techniques.
(b) Explain the steps involved in simple parity scan conversion algorithm.
3. (a) What is meant by composite transformations
(b) Write the general form of a scaling matrix with respect to a fixed point $P(h,k)$ where the scaling factors in x and y directions are a and b respectively.
4. Find the viewing transformation that maps a window whose left corner is at (1,1) and upper right corner is at (3,5) on to a view port that has lower corner at (0,0) and upper right corner at $(\frac{1}{2}, \frac{1}{2})$.
5. (a) If tilting is defined as a rotation about a axis followed by a rotation about y-axis in 3-D space, find the tilting matrix.
(b) Demonstrate that order of performing the rotation matrix for the above problem.
6. Implement the depth-buffer method to display the visible surfaces of a given polyhedron. How can the storage requirements for the depth buffer be determined from the definition of the objects to be displayed?
7. (a) Distinguish zero-order, first-order and second-order continuity.
(b) What is the organization of control points followed in Bezier's method to ensure second order continuity?
(c) What are the properties of Bezier's curve?
8. Discuss about the problems peculiar to animation and propose suitable solutions.
