ASSIGNMENT-3

Question Bank for Chapter-3

1. Explain basic 2D-Transformation in detail.
2. Explain Homogeneous Co-ordinates and matrix representation for basic transformation.
3. Prove two successive translations are additive.
4. Prove two successive scaling operations are multiplicative.
5. Explain: 1) General Pivot Point Rotation
   2) General Fixed Point Scaling
   3) General Scaling Directions
6. Explain 2-D Reflection and Shear.
7. Translate a rectangle with coordinate points a (4, 6), b (10, 6), c (10, 10) and d (4, 10) by 5 units in X direction and 5 units in Y direction.
8. Rotate a rectangle by 90^0 about an origin with coordinate points a (4, 6), b (10, 6), c (10, 10) and d (4, 10).
9. State types of clipping algorithms. Explain any one.
10. Define the terms:
    a. Window
    b. View port
    c. Viewing Transformation
11. Explain Window to Viewport co-ordinate Tranfsormation.
12. Write short note on clipping.
13. Explain Cohen-Sutherland line clipping algorithm.
14. Explain Liang-Barsky line clipping algorithm.
15. Explain Interior and Exterior Clipping.
16. Explain Polygon Clipping.
17. Explain following algorithm:
    a. Sutherland-Hodgeman polygon clipping
    b. Weiler-Atherton polygon clipping