

**Computer Graphics ETCS 211**  
**Assignment 4**

*To be submitted on or before 13/11/15*

- 1: Differentiate between window and a viewport. Explain what is viewing transformation?
- 2: What is line clipping and polygon clipping? Can you use line clipping algorithm for polygon clipping? Justify.
- 3: Given a clipping window  $P(0,0)$ ,  $Q(30,0)$ ,  $R(30,20)$ ,  $S(0,20)$ , use Cohen Sutherland algorithm to determine the visible portion of the line  $A(10,30)$  and  $B(40,0)$ .
- 4: Explain the Cohen Sutherland line clipping algorithm. Is this applicable to any type of window? Justify your answer.
- 5: What are windowing and clipping? Explain with suitable examples.
- 6: Define the following:
  - (a) Point clipping
  - (b) Line clipping
- 7: Define window. Why is the shape of window generally rectangular?
- 8: Explain the following:
  - (a) View plane
  - (b) Projectors
  - (c) Centre of projection
- 9: Differentiate between the following:
  - (a) Parallel and Perspective projection
  - (b) Oblique and Orthographic projection
  - (c) Cavalier and Cabinet projection
  - (d) Axonometric and Oblique projection.
- 10: Define with example: Bezier curve, B-spline curve.

