GOA COLLEGE OF ENGINEERING

Affiliated to Goa University

DEPARTMENT OF COMPUTER ENGINEERING

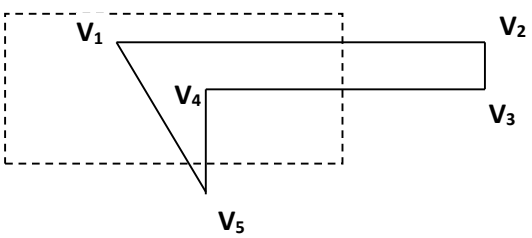
Course: COMP 6.4- COMPUTER GRAPHICS

Semester: VI semester **Year: Jan-June. 2020** **Scheme: RC2016-17**

SECOND TEST **Total Marks: 25** **Time: 11:00am-1:00pm**

Instructions:

1. The answer book document name should contain your Roll No. and your name, for example as **RollNo-Name.pdf**

S. No	Questions	Marks
1	Define the following terms with respect to 2D viewing. a) Window b) Viewport c) Viewing transformation	3
2	Explain Window to Viewport coordinate transformation.	4
3	Clip the line with coordinates (30,7) and (15,27) against window parameters Wxmin=10, Wxmax=25, Wymin=5, Wymax=15 using Cohen Sutherland line clipping.	7
4	For a triangle with vertices A(0,0), B(2,2), C(5,3) perform the following 2D transformations: a) x-Flip b) y-Flip c) Reflect about an axis at 60˚. d) Reflect about the origin **OR** For a quadrilateral with vertices A(25,20), B(-20,30) C(-20,-10), D(15,10) perform the following 2D transformations: a) x-direction shear relative to x-axis, shx = 2 b) y-direction shear relative to reference line, x_{ref} = - 2 with shy = 0.5	7
5	Obtain a clipped polygon for a given polygon(V_1 V_2 V_3 V_4 V_5) using Sutherland Hodgeman Polygon Clipping  	4