Department of CSIT, GGV, Blaspur, 2021_22(Even Semester)

Unit Test-II, B.Sc(CS) – VI Semester, Subject: Computer Graphics, Max Mark: 30, Duration: 1 hour

TIME: 1:00 to 2:00 PM

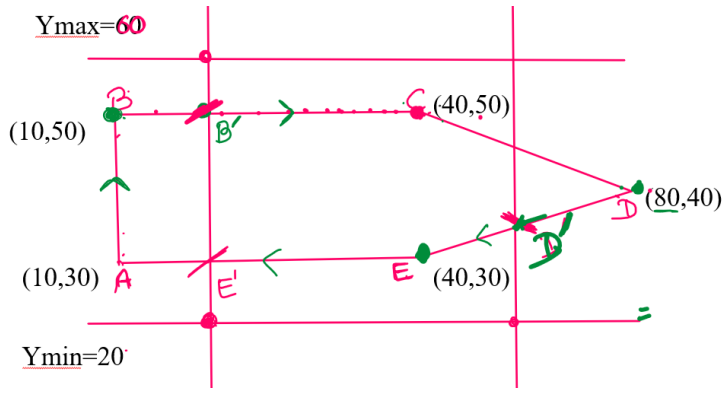
Note: Question number 1 (Section A) is compulsory. Attempt any three questions from the remaining (Section B).

Section A : Question 1 **2X6**

i) Write transformation matrix for parallel projection.
ii) Write transformation matrix for quadratic Bezier curve.
iii) Describe any two computer animation techniques.
iv) Write steps of z buffer algorithm.
v) Write 3D transformation matrix for Y axis rotation.
vi) Describe different types of polygons used in area sub division algorithm.

Section B **3X6**

1. Describe Perspective transformation in detail.
2. Describe RGB color models.
3. Let ABCD be the rectangular window with A(20,20) B(90,20) C(90,70) and D(20,70) .Find Region codes for endpoints. Use Cohen-Sutherland Algorithm to clip the line P1P2 with P1(10,30) P2(80,90)
4. Describe 2D rotation transformation in detail.
5. Find the intersection points D' and E' form the following diagram using Sutherland Hodgeman Polygon clipping algorithm.



Given $(X_{min}, X_{max})=(20,60)$ and $(Y_{min}, Y_{max})=(20,60)$