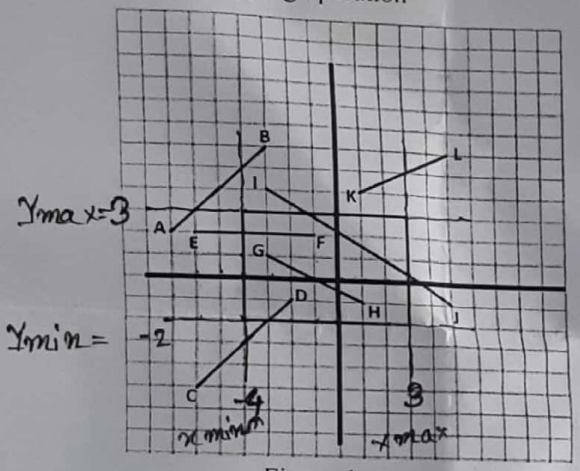
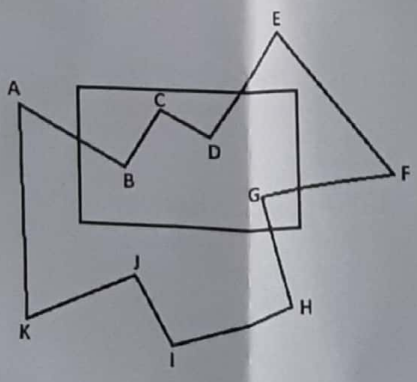
Daffodil International University

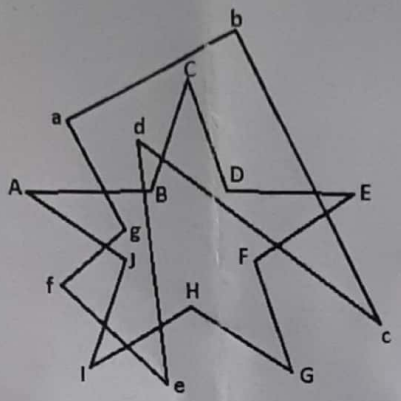
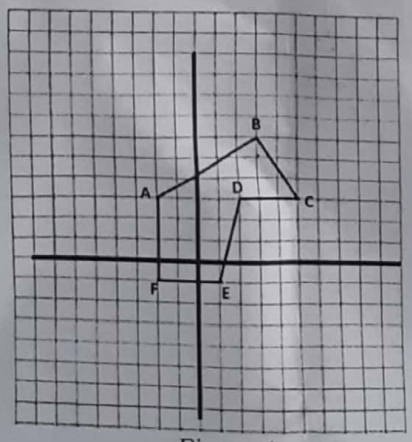
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Final Examination, Summer 2022
Course Code: CSE421 (Day), Course Title: Computer Graphics

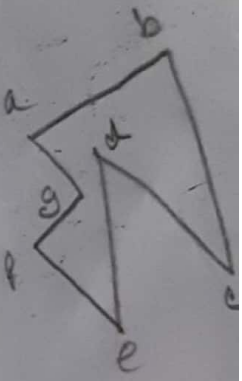
Time: 2:00 Hrs | **Sections Teachers: All** | **Marks: 40**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

2.	Apply Cohen-Sutherland algorithm for the following Figure 1 i) Identify the categories of lines AB, CD, EF, GH, IJ & KL. ii) Perform Clipping operation  Figure 1	[8]	CO3
3.	Formulate a new polygon by applying clipping Algorithm where clipping window is rectangle. Show the whole procedure using anticlockwise direction only in Figure 2.  Figure 2	[8]	CO3

4.	Formulate a new polygon by applying clipping operation using Wieler-Atherton Algorithm. Show the whole procedure using anticlockwise direction only in Figure 3 where ABCDEFGHIJ is subject polygon.  Figure: 3	[8]	CO3
5	Construct the transformed polygon from the following Figure 4. - Rotate the points (*) degree along Y-axis. - Shear the points Sh_x = (**) units. * Last two digit of your ID (Ex. 181-15-2534, then it will be 34 degree) ** Second last digit from your ID's last portion (Ex. 172-15-2534, then it will be (-3) unit)  Figure 4	[8]	CO2
6	Construct a circle by using Mid-Point Circle Algorithm where radius is 16 and center is (2nd last digit of your ID, last digit of your ID).	[8]	CO2



$\begin{vmatrix} -2 & 1 \\ 3 & 0 \end{vmatrix} \begin{vmatrix} a \\ 1 \end{vmatrix}$

$\Rightarrow -2$