

## **Interactive Computer Graphics**

### **Lab 12 (09/11/2021)**

Geometric transformations in computer graphics do not reduce the visual quality of images[transformations are done in object space], whereas they reduce visual quality in image processing as interpolation is involved[transformations are done in image space]

1. Using built-in functions in OpenGL , draw a polygon with 5 vertices of your choice and then do the following and display the results
  - a. Translate the polygon with vector (a,b)
  - b. Rotate the polygon with given theta
  - c. Scale the polygon with the given scaling factor
  - d. Reflect the polygon over lines  $x=0$ ,  $y=0$ ,  $x=y$  and  $x=-y$
  - e. Shear the polygon with shearing factors  $s_x$  and  $s_y$  along the x and y direction