BCA-4-04P: Computer Graphics Lab

Total Marks: 50
External Marks: 35
Internal Marks: 15
Credits: 2
Pass Percentage: 40%

Course: Computer Graphics Lab	
Course Code: BCA-4-04P	
Course Outcomes (COs)	
After the completion of this course, the students will be able to:	
CO1	Implement the basic concepts of computer graphics.
CO2	Design & Implement scan conversion problems using Python Programming
CO3	Apply clipping and filling techniques for modifying an object.
CO4	Understand the concepts of different type of geometric transformation of objects in 2D and 3D.
CO5	Understand the practical implementation of modeling, rendering, viewing of objects in 2D.

Detailed List of Programs:

Program No.	Name of Program
P1	Write a program to draw basic geometric shapes (lines, circles, rectangles) using a graphics library.
P2	Implement a program that allows the user to interactively draw and manipulate shapes on a canvas.
P3	WAP that demonstrates 2D transformations (translation, rotation, scaling) on a set of objects.
P4	Extend the program to include 3D transformations and demonstrate their effects.
P5	Implement line-drawing algorithms.
P6	Implement circle-drawing algorithms.
P7	Develop a program for polygon filling using scanline or other suitable algorithms.
P8	Create a program that renders objects with different shading models.
P9	Explore the impact of lighting models on the visual appearance of 3D

	objects in a scene.
P10	Implement texture mapping on a 3D model, and observe the changes in the rendered output.