Department of Computer Science & Engineering

COMPUTER GRAPHICS LABORATORY WITH MINI PROJECT

18CSL67

PREPARED BY

Mrs.Chandini U
Mr.Hanumanthappa H

Department of Computer Science & Engineering

SYLLABUS

Hours/Week: 02 | Exam Hours: 03
I.A. Marks: 40 | Total Hours: 36
Semester: VI A & B | Exam Marks: 60

PART - A

Design, develop, and implement the following programs in C / C++

Sl No.	Experiment	Page No.
1.	Implement Brenham's line drawing algorithm for all types of slope. **Link : https://youtu.be/srAVAeJrFqA**	1
2.	Create and rotate a triangle about the origin and a fixed point. **Link : https://youtu.be/WXE4-ZnImJc**	5
3.	Draw a colour cube and spin it using OpenGL transformation matrices.	10
4.	Draw a color cube and allow the user to move the camera suitably to experiment with perspective viewing.	15
5.	Clip a lines using Cohen-Sutherland algorithm **Link : https://youtu.be/LFCFWYtIM3o**	20
6.	To draw a simple shaded scene consisting of a tea pot on a table. Define suitably the position and properties of the light source along with the properties of the surfaces of the solid object used in the scene. Link : https://youtu.be/EHrfa0U8RWc	26
7.	Design, develop and implement recursively subdivide a tetrahedron to form 3D sierpinski gasket. The number of recursive steps is to be specified by the user. Link : https://youtu.be/xGhJoCNNMYk	31
8.	Develop a menu driven program to animate a flag using Bezier Curve algorithm	34
9.	Develop a menu driven program to fill the polygon using scan line algorithm Link : https://youtu.be/yrXtHE8WeJE	37

PART – B		
Student should develop mini project on the topics mentioned below or similar applications using Open GL API. Consider all types of attributes like color, thickness, styles, font, background, speed etc., while doing mini project.		

Note: (**During the practical exam: the students should demonstrate and answer Viva-Voce**)