**Group A**

1. Write C++/Java program to draw line using DDA and Bresenham‘s algorithm. Inherit pixel class and Use function overloading
2. Write C++/Java program to draw circle using Bresenham‘s algorithm. Inherit pixel class.
3. Write C++/Java program to draw 2-D object and perform following basic transformations,

a) Scaling

b) Translation

c) Rotation

Use operator overloading.

1. Write C++/Java program to draw the following pattern using any Line drawing algorithms.

**Group B**

1. Write C++/Java program for line drawing using DDA or Bresenham’s algorithm with patterns such as solid, dotted, dashed, dash dot and thick.
2. Write C++/Java program to draw a convex polygon and fill it with desired color using Seed fill algorithm. Use mouse interfacing to draw polygon.
3. Write C++/Java program to draw any object such as flower, waves using any curve generation techniques
4. Write C++/Java program to generate Hilbert curve using concept of fractals.
5. Write C++/Java program to implement translation, sheer, rotation and scaling transformations on equilateral triangle and rhombus.

**Group C**

1. Write C++/Java program to simulate any one of or similar scene-

Clock with pendulum

National Flag hoisting

Vehicle/boat locomotion

Water drop falling into the water and generated waves after impact

Kaleidoscope views generation (at least 3 colorful patterns)

1. Write C++/Java program to draw 3-D cube and perform following transformations on it using OpenGL. a) Scaling b) Translation c) Rotation about one axis