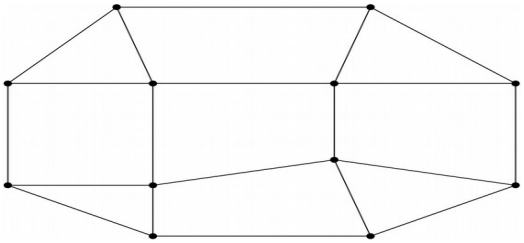
Date: 08/12/2020
Slot - 3
CS 701 – Lab Test

Answer any one.
Credits in decreasing order.
1>2>3>4.

Q1. Assume that you have a ready DCEL structure (edge, face, vertex tables) representing planar subdivisions (use the following figure). Write functions for the following:

a) Given a vertex v, which vertices are the neighbors of v?
b) Given a face f, which other faces are having a common edge with f?



Q2. Write a non-deterministic program for finding hamiltonian cycle (if any) in a undirected (un-weighted) graph.

Q3. Write a program for triangulation of a given monotone. Show intermediate stages also as outputs.

Q3. Implement a randomized algorithm for finding the minimum vertex cover (in a graph).