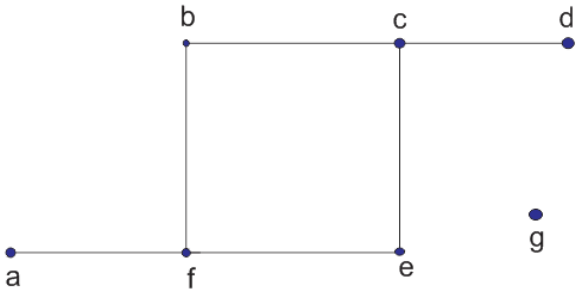


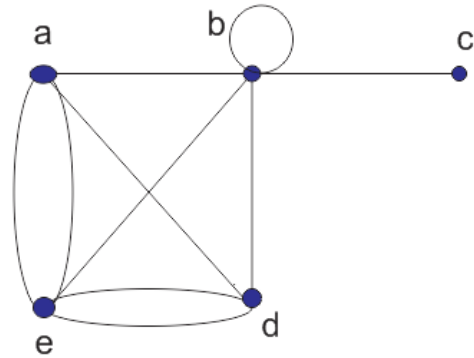
Graph:

Q No.1 How many edges are there in a graph with 10 vertices each of degree 6?

Q No.2 What are the degree of the vertices in the graph G & H in the following fig.?

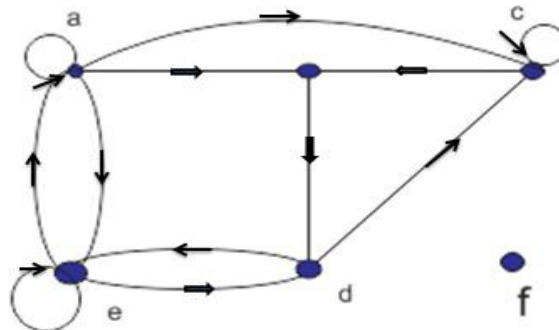


Graph-G

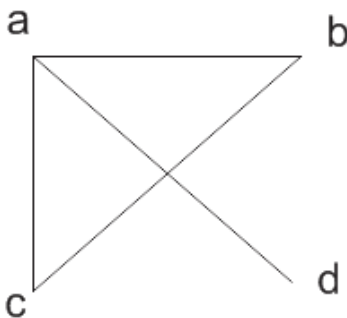


Graph-H

Q No.3 Find the in-degree & out-degree of each vertex in the graph with directed edges shown in the following fig.



Q No.4 Write an adjacency matrix to represent the graph shown in the following fig.

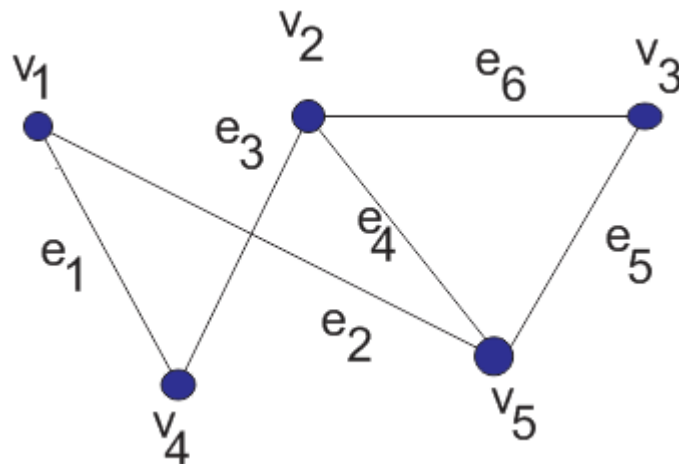


Q No.5 Draw a graph with the adjacency matrix

$$\begin{bmatrix} 0 & 1 & 1 & 0 \\ 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}$$

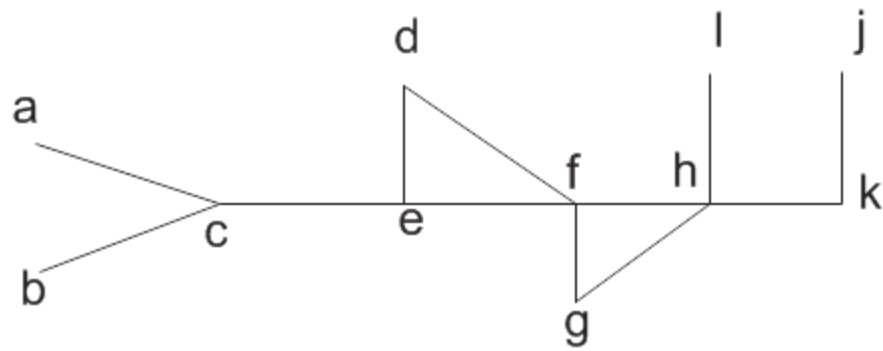
With respect to the ordering of vertices a,b,c,d.

Q No.6 Represent the graph shown in the following figure with an incidence matrix



Q No.7 Suppose that a connected planar simple graph has 20 vertices, each of degree 3, into how many regions does a representation of this planar graph split the plane?

Q No.8 Use the depth-first search to find a spanning face for graph G shown in the figure.



Q No.9 Use a breadth-first search to find a spanning tree for the graph shown in the figure.

