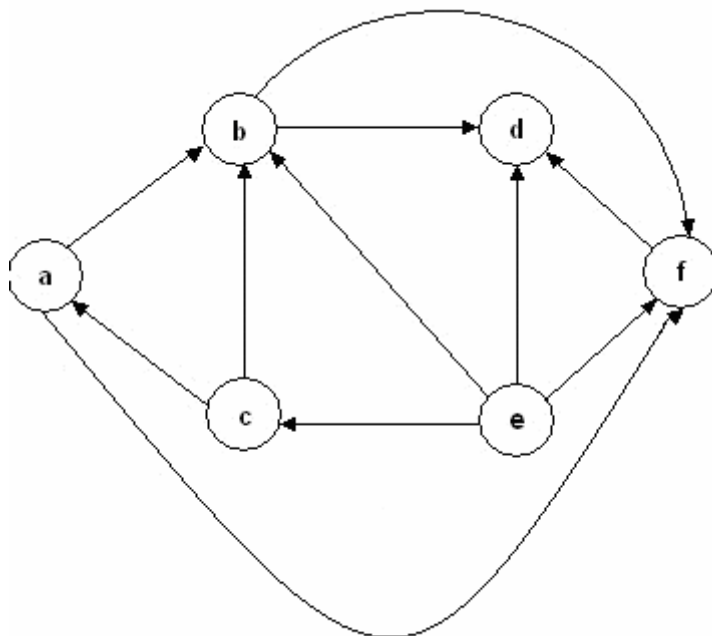


ICS 202-01 QUIZ#4 (Term 071)

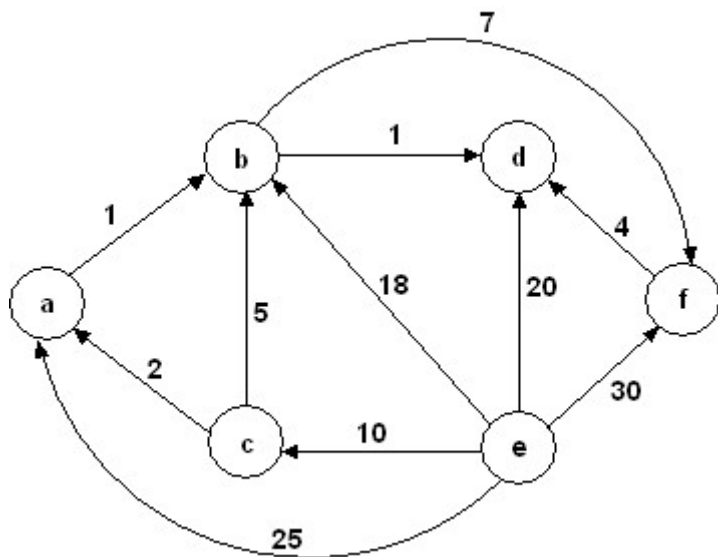
ID#: _____ NAME: _____

1. (a) Find a topological sort of the following graph:



(b) Draw the corresponding topological sort graph:

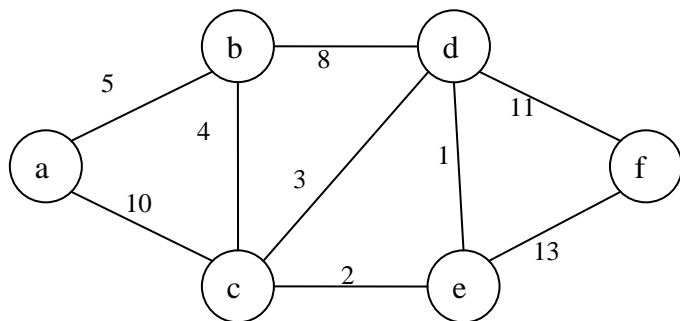
2. (a) Trace Dijkstra's Shortest Path algorithm to find the shortest path from vertex **e** to each of the other vertices:



Pass:	initial	1	2	3	4	5	6	shortest distance	predecessor
Active vertex:									
a									
b									
c									
d									
e									
f									

- (b) Draw the vertex-weighted digraph that is labeled by the shortest distances from vertex **e**:

3. (a) Trace Prim's algorithm in finding a minimum-cost spanning tree for the undirected, weighted graph given below starting at vertex **c**:



Pass:	initial	1	2	3	4	5	6	weight	vertex v1
Active vertex:									
a									
b									
c									
d									
e									
f									

(b) Draw the corresponding minimum-cost spanning tree: