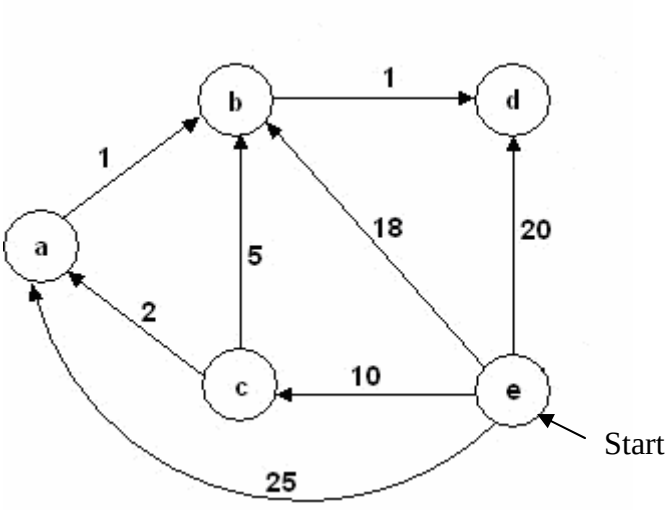
ICS 202 QUIZ#4 (Term 062)

ID#:_____ NAME:_____

1. (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									

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

2. (a) Consider the following hash table:

0	1	2	3	4	5	6	7	8	9	10
occupied	**occupied**	**empty**	**occupied**	**occupied**	**occupied**	**deleted**	**occupied**	**empty**	**occupied**	**empty**
11	**33**		**25**	**15**	**27**	~~**39**~~	**18**		**9**	

Write the probe sequences for the operations find(26) and insert(36) using linear probing in which h(key) = key % 11 and c(i) = i:

Operation	Probe sequence
find(26)	
insert(36)	