SOLUTIONS

Ans.2 (a)

Distance Vector Routing:

- Tell neighbors about distance of all the destination
- Node's computation depends on neighbors
- Each router maintains distance vector, (dist , cost) tuple per destination
- Periodically send copy of distance vector to all neighbors

Link State Routing:

- Tell about distance to each neighbor to all routers
- Each router computes its best paths

[2 Marks]

(b) The initial routing table of A would be

TO	DISTANCE
A	0
B	2
C	1
D	3
E	4
F	3
G	6

When link A-D is broken then routing table at A is calculated with the help of distance vectors received from node B and C while routing tables at B and C are computed by distance vectors of A, D, E, and F.

The updated routing table of A would be:

TO	DISTANCE
A	0
B	2
C	1
D	**4**
E	4
F	3
G	6

[4 Marks]

(c) Via

TO	B	C	E	G
A	7+2	6+3	3+1	2+3
B	0+2	4+3	7+1	4+3
C	3+2	0+3	5+1	5+3
D	6+2	7+3	4+1	3+3
E	2+2	3+3	0+1	6+3
F	7+2	5+3	6+1	7+3
G	8+2	8+3	5+1	0+3

Choose the minimum distance among four paths.

TO	DISTANCE	Via
A	4	E
B	2	B
C	3	C
D	(5→)0	(E→)--
E	1	E
F	7	E
G	3	G

[4 Marks]