

Quiz-3

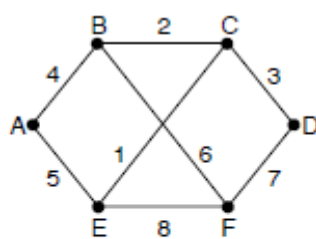
Soal diambil dari buku *COMPUTER NETWORKS, Sixth Edition, Andrew S. Tanenbaum, Nick Feamster, and David Wetherall, Pearson Education Limited, 2021*

- 1) Consider the network of Fig. 5-12(a).

Distance vector routing is used, and the following link state packets have just come in at router *D*: from *A*: (*B*: 5, *E*: 4); from *B*: (*A*: 4, *C*: 1, *F*: 5); from *C*: (*B*: 3, *D*: 4, *E*: 3); from *E*: (*A*: 2, *C*: 2, *F*: 2); from *F*: (*B*: 1, *D*: 2, *E*: 3).

The cost of the links from *D* to *C* and *F* are 3 and 4 respectively.

What is *D*'s new routing table? Give both the outgoing line to use and the cost.



(a)

Link		State		Packets	
A	B	C	D	E	F
Seq.	Seq.	Seq.	Seq.	Seq.	Seq.
Age	Age	Age	Age	Age	Age
B 4	A 4	B 2	C 3	A 5	B 6
E 5	C 2	D 3	F 7	C 1	D 7
	F 6	E 1		F 8	E 8

(b)

Figure 5-12. (a) A network. (b) The link state packets for this network.

- 2) Consider the network of Figure 5-12(a).

Distance vector routing is used, and the following vectors have just come in to router *C*: from *B*: (5, 0, 8, 12, 6, 2); from *D*: (16, 12, 6, 0, 9, 10); and from *E*: (7, 6, 3, 9, 0, 4).

The cost of the links from *C* to *B*, *D*, and *E*, are 6, 3, and 5, respectively.

What is *C*'s new routing table? Give both the outgoing line to use and the cost.

- 3) Consider the network and link costs shown in Fig. 5-12.

This network uses link state routing. Node *F* broadcasts a message using reverse path forwarding. Sketch the broadcast tree used in this scenario.

- 4) Looking at the network of Fig. 5-6, how many packets are generated by a broadcast from *B*, using
- reverse path forwarding?
 - the sink tree?