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6)

Distance vector Routing:

Solution:

1st iteration : (for Node A)

Destination	Cost	Next
Net 1	1	Net 1
Net 2	1	Net 2
Net 4	1	Net 4
Net 5	1	Net 5

for Node B.

Dest	Cost	Next
Net 2	1	Net 2
Net 3	1	Net 3
Net 6	1	Net 6

For Node C

Destination	Cost	Next
Net 5	1	Net 5
Net 6	1	Net 6

For Node D

Destination	Cost	Next
Net 4	1	Net 4

Destination	Cost	Next Hop
Net 1	3	Net 4
Net 2	3/7	Net 4
Net 3	5/7	Net 4
Net 5	3/7	Net 4

Forwarding Table for each Node:

Node A

Dest	Cost	Next
Net 1	1	Net 1
Net 2	1	Net 2
Net 3	1	Net 2
Net 4	1	Net 4
Net 5	1	Net 5
Net 6	2	Net 2

Node B

Dest	Cost	Node
Net 1	2	Net 2
Net 2	1	Net 2
Net 3	1	Net 3
Net 4	2	Net 2
Net 5	2	Net2/Net 6
Net 6	1	Net6.

for Node C

Destination	Cost	Next
Net 1	2	Net5
Net 2	2	Net 6
Net 3	2	Net 6
Net 4	2	Net 5
Net 5	1	Net5
Net 6	1	Net 6

for Node D

Destination	Cost	Next
Net 1	2	Net 4
Net 2	2	Net 4
Net 3	3	Net 4
Net 4	1	Net 4
Net 5	2	Net 4
Net 6	3	Net 4

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Q. No. 2 =>

info Stored at Node	Distance to reach Node						
	A	B	C	D	E	F	G
A	0	1	1	–	1	1	–
B	1	0	1	–	–	–	–
C	1	1	0	1	–	–	–
D	–	–	1	0	–	–	1
E	1	–	–	–	0	–	–
F	1	–	–	–	–	0	1
G	–	–	–	1	–	1	0

After updating, we get following Result

info Stored at node	Distance to reach node						
	A	B	C	D	E	F	G
A	0	1	1	2	1	1	2
B	1	0	1	2	2	2	3
C	1	1	0	1	2	2	2
D	2	2	1	0	3	2	1
E	1	2	2	3	0	2	3
F	1	2	2	2	2	0	1
G	2	3	2	1	3	1	0

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Forwarding Table for all Nodes can be shown as below

1) for Node A.

Destination	cost	Next hop
B	1	B
C	1	C
D	2	C
E	1	E
F	1	F
G	2	F

For Node B

Destination	cost	Next hop
A	1	A
C	1	C
D	2	C
E	2	A
F	2	A
G	2	A

3) for Node C

Destination	cost	Next hop
A	1	A
B	1	B
D	1	D
E	2	A
F	2	A
G	2	D

For Node D.

Dest	cost	Next hop
A	2	C
B	2	C
C	1	C
E	3	C
F	2	G
G	1	G

5] for Node E

Destination	cost	Next hop
A	1	A
B	2	A
C	2	A
D	3	A
F	2	A
G	3	A

6) for Node F

Dest	cost	Next hop
A	1	A
B	2	A
C	2	A
D	2	G
E	2	A
G	1	G

6) for Node G

Destination	cost	Next hop
A	2	F
B	3	F/D
C	2	D
D	1	D
E	3	F
F	1	F