Homework7

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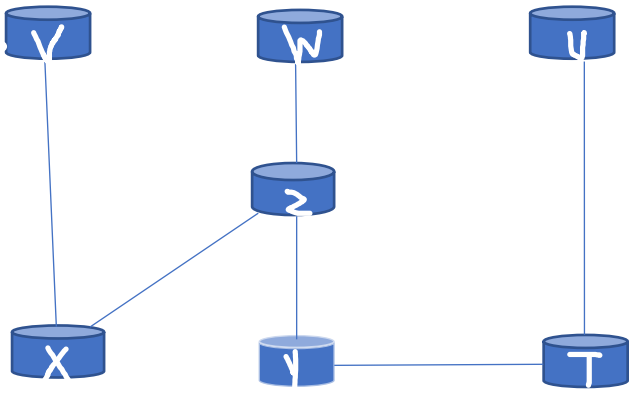
1.(a)

Step	N'	D(t), p(t)	D(u), p(u)	D(v), p(v)	D(w), p(w)	D(y), p(y)	D(z), p(z)
0	x	Inf	Inf	**2, x**	inf	6, x	3, x
1	xv	Inf	Inf		6, v	6, x	**3, x**
2	xvz	Inf	Inf		**4, z**	5, z	
3	xvzw	9, w	16, w			**5, z**	
4	xvzwy	**7, y**	16, t				
5	xvzwyt		**13, t**				
6	xvzwytu						

1.(b)



1.(c)

Destination	Outgoing link
v	(x,v)
z	(x,z)
y	(x,z)
w	(x,z)
t	(x,z)
u	(x,z)

2.(a)

The numbers in red show that all nodes receive and process that update at time T = 1.

Node W	W	X	Y	Z
W	0	6	**3**	1
X	**6**	**0**	**2**	**Inf**
Z	**1**	**inf**	**2**	**0**
Node X	W	X	Y	Z
W	**0**	**6**	**Inf**	**1**
X	6	0	2	**4**
Y	**Inf**	**2**	**0**	**2**
Node Y	W	X	Y	Z
X	**6**	**0**	**2**	**inf**
Y	**3**	2	0	2
Z	**1**	**inf**	**2**	**0**
Node Z	W	X	Y	Z
W	**0**	**6**	**Inf**	**1**
Y	**1nf**	**2**	**0**	**2**
Z	1	**4**	2	0

2.(b)

No. This table is not stable.

For example, node Z will send its new table to its neighbor's node W and node Y at T=1.

3.(a)

NO. ISP only wants to route traffic to its customer networks.

When ISP B wants to send data to ISP A through ISP X, it will occupy the resources of ISP X without generating any benefits for ISP X.

3.(b)

Yes, because Y pays A, so ISP has the responsibility to route traffic to its customer networks, which means the customer needs to be reachable from every other customer.