

# Lecture 5 (2/4) Self Test

**Due** Feb 11 at 5pm

**Points** 1

**Questions** 10

**Available** Feb 4 at 5pm - Jun 1 at 5pm 4 months

**Time Limit** None

Score for this survey: **1** out of 1

Submitted Feb 5 at 10:51pm

This attempt took 6 minutes.

## Question 1

Do you feel LOST?

- ☐ Yes, and I can attend the LOST section
- ☐ Yes, but I can't attend the LOST section
- ☒ No

You Answered

## Question 2

Which of these networks tends to have a highly structured topology?

- ☐ Carriers
- ☐ Enterprises
- ☒ Data centers

You Answered

**Data centers**

### Question 3

If you have valid routing state, does that mean the network will never drop any packets?

☐ yes

☒ no

no

You Answered

### Question 4

Routing ensures reliable delivery of packets between end hosts

☒ True

☐ False

False

You Answered

### Question 5

A directed delivery tree for a particular destination using destination-based routing must obey which of these conditions:

- ☒ Touch every node
- ☒ Use the minimal number of links
- ☒ Have all paths end in the destination
- ☐ Travel the shortest paths to the destination
- ☒ Have only one outgoing arrow from each node

**Have only one outgoing arrow from each node, Have all paths end in the destination, Touch every node**

### Question 6

Does the "no loops, no dead ends" theorem only hold true for destination-based forwarding?

- ☒ yes
- ☐ no

no

### Question 7

Routing occurs when a data packet arrives at a router and is sent out another port.

You Answered

☒ true

☐ false

false

### Question 8

The routing activity we did in class utilizes a distributed and asynchronous version of...

☐ Dijkstra's shortest-path algorithm

☐ Breadth-first search

You Answered

☒ The Bellman-Ford path-finding algorithm

☐ The Floyd-Warshall path-find algorithm

**The Bellman-Ford path-finding algorithm**

## Question 9

A spanning tree:

0/1 Answered

☒ Is a subgraph of another graph with the same vertices

☐ Is a subgraph of another graph which may contain more vertices

0/1 Answered

☒ Contains one fewer edges than vertices

☐ Has twice as many edges as there are vertices

Is a subgraph of another graph with the same vertices

Contains one fewer edges than vertices

## Question 10

1. In a network with 5 routers the destination X is attached to Router 4 and each router's outgoing port (i.e., next hop) is as follows:

Router 1: → Router 5 (i.e., Router 1's next hop is always Router 5)

Router 2: → Router 3

Router 3: → Router 1

Router 4: → Destination X

Router 5: → Router 2

Is the routing state for destination X (which is router 4) valid?

You Answered

☐ yes

☒ no

no

Survey Score: **1** out of 1