Network Architectures 3329 02
Fall 2018 **Quiz 5-1**
11/01/18

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1. Which of the following table act(s) as the glue that stitches together the network layer's data and control planes in the traditional networks?

   A. forwarding table

   B. routing table

   C. flow table

   D. all of the above

2. In the per-router control paradigm, each router has a routing component that performs two tasks: local routing computation and communication with other routers.

   A. True B. False

3. Which of the following applies to link-state (LS) routing algorithm

   A. each router has complete information of the network topology

   B. routers do not exchange routing information

   C. routers perform computation independent of each other

   D. all of the above

4. In Dijkstra's algorithm, how many iterations are needed to compute the least-cost paths to m (closest) destinations in a network of n nodes.

   A. m

   B. n

   C. $n - m$

   D. none of the above

5. In Dijkstra's algorithm, define $c(x, y)$ to be the cost between nodes x, y, $D(v)$ the current value of cost of path from source to destination v, $p(v)$ the predecessor node along path from source to v, N' the set of nodes whose least cost path definitely known. Suppose we have $y \in N'$, $D(z) = 10, p(z) = y, c(y, z) = 3$, what is the value of $D(y)$

   A. 3

   B. 10

   C. 7

   D. not known