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| Computer Networks (BSE-7A)  Quiz 04 (Fall 2023). Instructor: Dr. Syed M. Irteza | | Name: ***SOLUTION*** |
| Date: 2023-11-21 | | Roll Number: |
| Total Marks: 10 | Time Allowed: 10 mins |

1. What could be a “good” path when we speak about routing protocols?
   1. Least cost
   2. Fastest
   3. Least congested
   4. ***All of the above***
2. A path could be defined as:
   1. What we find within a single forwarding table entry
   2. ***A sequence of routers packets traverses from an initial source host to destination host***
   3. A sequence of hosts packets traverses from an initial source router to destination router
   4. None of the above
3. If direct link cost between node w and node z is infinity this indicates:
   1. There is no path between w and z
   2. There is a direct link between w and z
   3. ***There is no direct link between w and z***
   4. There is a path between w and z, but another path is better
4. The notation p(v) when we discussed a routing algorithm indicated the:
   1. ***Predecessor of node v from the least cost path from source node u to node v***
   2. Predecessor of node u from the least cost path from source node u to node v
   3. Predecessor of node v from the least cost path from source node v to node u
   4. Least cost path from source node u to node v
5. With respect to routing algorithms, what category of algorithms is considered ***global***, and what category of algorithms is considered ***decentralized***? (3m)

***Global 🡪 Link State algorithms (such as Dijkstra’s)***

***Decentralized 🡪 Distance Vector (such as Bellman-Ford)***

1. After applying Dijkstra’s algorithm on a given graph (N, E), what were the two resulting outputs that we attained? (3m)

***A least-cost path tree, we build this using the order of the N’ set of nodes and the predecessor of each node.***

***A forwarding table, this is built simply by looking at the least-cost path tree, and deciding the immediate next hop at the source node u to get to any destination node v.***