

## COM-208: Computer Networks - Sample Quiz

Name:

1. The NAT protocol:
  - (a) is a stateless protocol.
  - (b) allows multiple hosts to use the same public IP address.
  - (c) is used to reassemble IP packet fragments.
2. The poisoned reverse is:
  - (a) an attack that poisons the forwarding table.
  - (b) a mechanism used by NAT to translate incoming traffic (from the public network to the private network).
  - (c) an optimization to reduce convergence time in distance-vector algorithms.
3. The following is true:
  - (a) Routing is a local process (in a router), while forwarding is a network-wide process.
  - (b) Forwarding is a local process (in a router), while routing is a network-wide process.
  - (c) There is no difference between routing and forwarding.
4. A NAT gateway modifies the following fields in outgoing packets (from a private network to the Internet):
  - (a) source IP address.
  - (b) destination TCP port.
  - (c) both of the above.
5. In a link-state routing algorithm:
  - (a) each router communicates only with its neighbors.
  - (b) each router keeps state for each packet in a private cache.
  - (c) each router forms the full picture of the network.
6. A forwarding table may be populated:
  - (a) by a routing process.
  - (b) during connection setup between two hosts.
  - (c) both of the above.
7. The network layer of the Internet offers the following services:
  - (a) guaranteed maximum loss rate.
  - (b) guaranteed minimum throughput.
  - (c) neither of the above.
8. Distance-vector routing algorithms:
  - (a) are distributed algorithms.
  - (b) take as input the routers' graph and the cost of the links.
  - (c) converge faster than link-state algorithms.
9. The DHCP protocol is used:
  - (a) to allocate IP addresses to hosts.
  - (b) as a mechanism to prevent routing loops.
  - (c) to establish connections between different AS-es.
10. The following is true about BGP:
  - (a) It is a centralized algorithm.
  - (b) It determines paths that span multiple AS-es.
  - (c) It always selects a route that crosses the fewest number of routers.