1. **What is a key characteristic of Distance Vector routing protocols?** a) Routers send information only to their neighbors.
   b) Routers calculate the entire path to the destination.
   c) Routers maintain a complete map of the network topology.
   d) Routers do not share routing information with other routers.

   Ans : a

2. **Which of the following protocols is an example of a Distance Vector routing protocol?** a) OSPF (Open Shortest Path First)
   b) RIP (Routing Information Protocol)
   c) IS-IS (Intermediate System to Intermediate System)
   d) BGP (Border Gateway Protocol)

   Ans: b

3. **How often do routers using RIP (Routing Information Protocol) send their entire routing table to their neighbors?** a) Every 10 seconds
   b) Every 30 seconds
   c) Every 60 seconds
   d) Every 90 seconds

   Ans: b

4. **What is the primary algorithm used by Link State routing protocols?** a) Bellman-Ford algorithm
   b) Dijkstra's algorithm
   c) Floyd-Warshall algorithm
   d) A* algorithm

   Ans: b

5. **Which of the following protocols is an example of a Link State routing protocol?** a) RIP (Routing Information Protocol)
   b) EIGRP (Enhanced Interior Gateway Routing Protocol)
   c) OSPF (Open Shortest Path First)
   d) BGP (Border Gateway Protocol)

   Ans: c

6. **What information does a Link State routing protocol router use to create its routing table?**
   a) Information from the entire network topology
   b) Only the information from its immediate neighbors
   c) Only the information from the shortest path
   d) Information from a centralized server

   Ans: a

7. **How do routers using OSPF (Open Shortest Path First) maintain an accurate view of the network?** a) By periodically sending distance vectors to neighbors
   b) By sending Link State Advertisements (LSAs) to all routers in the network
   c) By calculating routes based on static configurations
   d) By using a combination of static and dynamic routes

   Ans: b

8. **What is a major advantage of Link State routing protocols over Distance Vector routing protocols?** a) Faster convergence
   b) Simpler to implement
   c) Uses less memory
   d) Sends updates less frequently

   Ans: a

9. **Which issue is a common drawback of Distance Vector routing protocols?** a) They require a large amount of memory.
   b) They are more complex to implement and maintain.
   c) They suffer from the "count to infinity" problem.
   d) They are less reliable in small networks.

   Ans: c

Answers:

1. a) Routers send information only to their neighbors.
2. b) RIP (Routing Information Protocol)
3. b) Every 30 seconds
4. b) Dijkstra's algorithm
5. c) OSPF (Open Shortest Path First)
6. a) Information from the entire network topology
7. b) By sending Link State Advertisements (LSAs) to all routers in the network
8. a) Faster convergence
9. b) To reduce the number of adjacencies required in a broadcast network
10. c) They suffer from the "count to infinity" problem