**Chapter 10 - Quiz**

1. Which routing protocol is considered a link-state protocol?
2. RIP v1
3. RIP v2
4. EIGRP
5. IS-IS
6. BGP
7. Which mechanism is used by link-state routing protocols to build and maintain routing tables?
8. service network advertisements
9. hello packets
10. link-state advertisements
11. routing table broadcasts
12. shortest path first algorithm
13. Spanning Tree Protocol
14. Match the attribute to the associated protocol, either link state or distance vector.

Attributes:

1. Hardware intensive link state
2. Fast convergence link state
3. Builds complete topology link state
4. Uses Dijkstra algorithm link state
5. Uses Bellman-Ford algorithm distance vector
6. Depends on neighbor routes distance vector
7. Uses timed updates distance vector
8. Routes by "rumor" distance vector
9. What is one advantage of link-state protocols over most distance-vector protocols?
10. ability to route IPX
11. continual route checking with periodic updates
12. faster convergence
13. lower hardware requirements
14. Why do link-state protocols converge faster than most distance vector protocols?
15. Distance vector protocols compute their routing tables before sending any routing update. Link-state protocols do not.
16. Link-state protocols have lower computing requirements than distance vector protocols.
17. Link-state protocols send updates out more often than distance vector protocols.
18. Distance vector protocols receive more packets per update than link-state protocols.
19. Refer to the following topology description to answer the question.   
     There are four routers, A, B, C, and D.  
     Router A is connected to router B and router C via WAN links.  
     Router B is connected to router D via a WAN link  
    If all routers are using a link-state routing protocol, which routers does Router A send hello packets to?
20. B, C
21. B, C, D
22. only the DR
23. only the BR and BDR
24. What information is contained in LSP's sent by link-state routers to their neighbors?
25. copy of the routing table
26. copy of the topology database
27. state of directly connected links
28. most current version of the SPF tree
29. What is one disadvantage of link-state protocols over distance-vector protocols?
30. slow convergence
31. flat network topology
32. periodic updates
33. higher processing requirements
34. After two OSPF routers have exchanged Hello packets and formed an adjacency, what is the next thing to occur?
35. They take turns broadcasting their entire routing table to each other.
36. They start sending link-state packets to each other.
37. They negotiate to determine who will be the root router.
38. They adjust their hello timers so they do not collide with each other.
39. How does a router learn about a directly connected network?
40. When the administrator configures a static route.
41. When the administrator configures a dynamic routing protocol.
42. When the administrator assigns an IP address and subnet mask to the interface.
43. When a broadcast address is discovered on a specific interface.