Computer Networks Questions & Answers – RIP v1

This set of Computer Networks Multiple Choice Questions & Answers (MCQs) focuses on “RIP v1”.

1. Which routing protocol has a maximum network diameter (hop count) of 15?
a) RIPv1
b) RIPv2
c) EIGRP
d) Both RIPv1 and RIPv2

View Answer

Answer: d
Explanation: Both RIPv1 and RIPv2 support a maximum hop count of 15 because they use 4-bits to store this value. RIPv1 uses classful routing whereas RIPv2 uses classless routing. The routing updates are broadcasted over the network. It notifies routers about the update so that they update their own routing tables.

2. How often does a RIPv1 router broadcast its routing table by default?
a) Every 30 seconds
b) Every 60 seconds
c) Every 90 seconds
d) RIPv1 does not broadcast periodically

View Answer

Answer: a
Explanation: RIPv1 router broadcasts its routing table every 30 seconds by default. The broadcasted routing table can be used by other routers to find the shortest path among the network devices.

3. Which command displays RIP routing updates?
a) Show IP route
b) Debug IP rip
c) Show protocols
d) Debug IP route

View Answer

Answer: b
Explanation: The debug IP rip command is used to show the Internet Protocol (IP) Routing Information Protocol (RIP) updates being sent and received on the router. It verifies that the updates are being broadcasted and not multicasted.

4. Two connected routers are configured with RIP routing. What will be the result when a router receives a routing update that contains a higher-cost path to a network already in its routing table?
a) The updated information will be added to the existing routing table Debug IP rip
b) The update will be ignored and no further action will occur Debug IP route
c) The updated information will replace the existing routing table entry
d) The existing routing table entry will be deleted from the routing table and all routers will exchange routing updates to reach convergence

View Answer

Answer: b
Explanation: When a routing update is received by a router, the router first checks the administrative distance (AD) and always chooses the route with the lowest AD. However, if two routes are received and they both have the same AD, then the router will choose the one route with the lowest metrics, or in RIP's case, hop count.

5. You type debug IP rip on your router console and see that 172.16.10.0 is being advertised to you with a metric of 16. What does this mean?
a) The route is 16 hops away Debug IP rip
b) The route has a delay of 16 microseconds Debug IP route
c) The route is inaccessible
d) The route is queued at 16 messages a second

View Answer

Answer: c
Explanation: You cannot have 16 hops on a RIP network by default, because the max default hops possible is 15. If you receive a route advertised with a metric of 16, this means it is inaccessible.

6. Default administrative distance of a static route is _____
a) 0
b) 90
c) 100
d) 1

View Answer

Answer: d
Explanation: 1 is the default administrative distance of Static Route. It is used by routers to select the best path when there are different routes to the same destination. It's used only two different routing protocols are being used.

7. Which protocol gives a full route table update every 30 seconds?
a) IEGRP
b) RIP
c) ICMP
d) IP

View Answer

Answer: b
Explanation: RIP gives a full route table update every 30 seconds. The broadcasted routing table can be used by other routers to find the shortest path among the network devices.

8. _____ is the default administrative distance of RIP.
a) 0
b) 90
c) 120
d) 130

View Answer

Answer: c
Explanation: The default administrative distance is the default count of numbers assigned to arbitrary routes to a destination. The default administrative distance of RIP is 120. It is used to find the shortest route amongst the number of paths available.

9. Which statement is true regarding classless routing protocol?
a) The use of discontinuous networks is not allowed
b) Use of variable length subnet masks is permitted
c) RIPv1 is a classless routing protocol
d) IGRP supports classes routing within the same autonomous system

View Answer

Answer: b
Explanation: Use of variable length subnet masks is permitted in classless routing protocols. Also use of discontinuous networks is allowed in such routing protocols. RIPv1 is a classful routing protocol but RIPv2 is classless routing protocol.

10. Where should we use default routing?
a) On stub networks- which have only one exit path out of the network
b) Which have more than one exit path out of the network

c) Minimum five exit paths out of the network
d) Maximum five exit paths out of the network

View Answer

Answer: a
Explanation: We must use default routing on stub networks. They have only one exit path out of the network, so there can be no specific path decided for such networks.

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