CCIE R&S Core Knowledge Question(6)

1. What is the default OSPF network for the following media types: Ethernet, Token Ring, and FDDI?

Highlight for answer: Broadcast

2. What OSPF router type connects one or more areas to the backbone and acts as a gateway for interarea traffic?

Highlight for Answer: Area Border Router (ABR)

3. To be in compliance with the BGP synchronization rule, there must be a match for the prefix in the IP routing table in order for an internal BGP (iBGP) path to be considered a valid path. What additional criteria must an OSPF route meet?Highlight for answer: The OSPF router ID must match the BGP router ID of the iBGP neighbor.

4. Give at least two possible reasons as to why the prefix 150.1.2.0/24 is experiencing a RIB-failure:

R1> sh ip bgp
BGP table version is 5, local router ID is 200.200.200.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
r RIB-failure
Origin codes: i - IGP, e - EGP, ? - incomplete

Network	Next Hop	Metric LocPrf Weight Path
r> 150.1.2.0/24	10.1.1.2	0 110 0 300 i
*> 155.1.123.0/24	10.1.1.2	0 160 0 300 i

Highlight for answer: Generally this is due to the existence of a route with a lower AD in the IP routing table. This can also be due to a memory error or the number of routes in VRF exceeding the route-limit configured under the VRF instance (outside of the scope of the Routing and Switching lab?)

5. What is the difference between OSPF neighbor and adjacencies?

Highlight for answer: A neighbor is another OSPF router that is attached to one of the first router's directly connected links.

An OSPF adjacency is a conceptual link to a neighbor over which LSAs can be sent.