**1.** Which of the following must be true for a static route to be installed in a router’s IP routing table?

**a.** The outgoing interface associated with the route must be in an “up and up” state.

**b.** The router must receive a routing update from a neighboring router.

**c.** The **ip route** command must be added to the configuration.

**d.** The outgoing interface’s **ip address** command must use the **special** keyword.

**2.** Which of the following commands correctly configures a static route?

**a.** **ip route 10.1.3.0 255.255.255.0 10.1.130.253**

**b.** **ip route 10.1.3.0 serial 0**

**c.** **ip route 10.1.3.0 /24 10.1.130.253**

**d.** **ip route 10.1.3.0 /24 serial 0**

**3.** Which of the following routing protocols are considered to use distance vector logic?

**a.** RIP

**b.** IGRP

**c.** EIGRP

**d.** OSPF

**4.** Which of the following routing protocols are considered to use link-state logic?

**a.** RIP

**b.** RIP-2

**c.** IGRP

**d.** EIGRP

**e.** OSPF

**f.** Integrated IS-IS

**5.** Which of the following routing protocols support VLSM?

**a.** RIP

**b.** RIP-2

**c.** IGRP

**d.** EIGRP

**e.** OSPF

**f.** Integrated IS-IS

**6.** Which of the following routing protocols are considered to be capable of converging quickly?

**a.** RIP

**b.** RIP-2

**c.** IGRP

**d.** EIGRP

**e.** OSPF

**f.** Integrated IS-IS

**7.** Router1 has interfaces with addresses 9.1.1.1 and 10.1.1.1. Router2, connected to Router1 over a serial link, has interfaces with addresses 10.1.1.2 and 11.1.1.2. Which of the following commands would be part of a complete RIP Version 2 configuration on Router2, with which Router2 advertises out all interfaces, and about all routes?

**a.** **router rip**

**b.** **router rip 3**

**c.** **network 9.0.0.0**

**d.** **version 2**

**e.** **network 10.0.0.0**

**f.** **network 10.1.1.1**

**g.** **network 10.1.1.2**

**h.** **network 11.0.0.0**

**i.** **network 11.1.1.2**

**8.** Which of the following **network** commands, following a **router rip** command, would cause RIP to send updates out two interfaces whose IP addresses are 10.1.2.1 and 10.1.1.1, mask 255.255.255.0?

**a.** **network 10.0.0.0**

**b.** **network 10.1.1.0 10.1.2.0**

**c.** **network 10.1.1.1. 10.1.2.1**

**d.** **network 10.1.0.0 255.255.0.0**

**e.** **network 10**

**f.** You cannot do this with only one **network** command.

**9.** What command(s) list(s) information identifying the neighboring routers that are sending routing information to a particular router?

**a.** **show ip**

**b.** **show ip protocol**

**c.** **show ip routing-protocols**

**d.** **show ip route**

**e.** **show ip route neighbor**

**f.** **show ip route received**

**10.** Review the snippet from a **show ip route** command on a router:

R 10.1.2.0 [120/1] via 10.1.128.252, 00:00:13, Serial0/0/1

Which of the following statements are true regarding this output?

**a.** The administrative distance is 1.

**b.** The administrative distance is 120.

**c.** The metric is 1.

**d.** The metric is not listed.

**e.** The router added this route to the routing table 13 seconds ago.

**f.** The router must wait 13 seconds before advertising this route again.

**Table 15-1** *“Do I Know This Already?” Foundation Topics Section-to-Question Mapping*

|  |  |
| --- | --- |
| **Foundation Topics Section** | **Questions** |
|  |  |
| VPN Fundamentals | 1–2 |
|  |  |
| IPsec VPNs | 3–5 |
|  |  |
| SSL VPNs | 6 |
|  |  |

**1.** Which of the following terms refers to a VPN that uses the Internet to connect the sites of a single company, rather than using leased lines or Frame Relay?

**a.** Intranet VPN

**b.** Extranet VPN

**c.** Access VPN

**d.** Enterprise VPN

**2.** Which of the following are not considered to be desirable security goals for a site-to-site VPN?

**a.** Message integrity checks

**b.** Privacy (encryption)

**c.** Antivirus

**d.** Authentication

**3.** Which of the following functions could be performed by the IPsec IP Authentication Header?

**a.** Authentication

**b.** Encryption

**c.** Message integrity checks

**d.** Anti-reply

**4.** Which of the following is considered to be the best encryption protocol for providing privacy in an IPsec VPN as compared to the other answers?

**a.** AES

**b.** HMAC-MD5

**c.** HMAC-SHA-1

**d.** DES

**e.** 3DES

**5.** Which three of the following options would be the most commonly used options for newly purchased and installed VPN components today?

**a.** ASA

**b.** PIX firewall

**c.** VPN concentrator

**d.** Cisco router

**e.** Cisco VPN client

**6.** When using the Cisco Web VPN solution, with the client using a normal web browser without any special client software, which of the following are true?

**a.** The user creates a TCP connection to a Web VPN server using SSL.

**b.** If the user connects to a normal web server inside the enterprise, and that server only supports HTTP and not SSL, those packets pass over the Internet unencrypted.

**c.** The Web VPN server connects to internal web servers on behalf of the Web VPN client, translating between HTTP and SSL as need be.

**d.** The web VPN client cannot connect without at least thin-client SSL software installed on the client.

**1.** Which of the following is the most likely organization from which an enterprise could obtain an administrative assignment of a block of IPv6 global unicast IP addresses?

**a.** An ISP

**b.** ICANN

**c.** An RIR

**d.** Global unicast addresses are not administratively assigned by an outside organization.

**2.** Which of the following is the shortest valid abbreviation for FE80:0000:0000:0100:0000:0000:0000:0123?

**a.** FE80::100::123

**b.** FE8::1::123

**c.** FE80::100:0:0:0:123:4567

**d.** FE80:0:0:100::123

**3.** Which of the following answers lists a multicast IPv6 address?

**a.** 2000::1:1234:5678:9ABC

**b.** FD80::1:1234:5678:9ABC

**c.** FE80::1:1234:5678:9ABC

**d.** FF80::1:1234:5678:9ABC

**4.** Which of the following answers list either a protocol or function that can be used by a host to dynamically learn its own IPv6 address?

**a.** Stateful DHCP

**b.** Stateless DHCP

**c.** Stateless autoconfiguration

**d.** Neighbor Discovery Protocol

**5.** Which of the following help allow an IPv6 host to learn the IP address of a default gateway on its subnet?

**a.** Stateful DHCP

**b.** Stateless RS

**c.** Stateless autoconfiguration

**d.** Neighbor Discovery Protocol

**6.** Which of the following are routing protocols that support IPv6?

**a.** RIPng

**b.** RIP-2

**c.** OSPFv2

**d.** OSPFv3

**e.** OSPFv4

**7.** In the following configuration, this router’s Fa0/0 interface has a MAC address of 4444.4444.4444. Which of the following IPv6 addresses will the interface use?

*ipv6 unicast-routing*

*ipv6 router rip tag1*

*interface FastEthernet0/0*

*ipv6 address 3456::1/64*

**a.** 3456::C444:44FF:FE44:4444

**b.** 3456::4444:44FF:FE44:4444

**c.** 3456::1

**d.** FE80::1

**e.** FE80::6444:44FF:FE44:4444

**f.** FE80::4444:4444:4444

**8.** In the configuration text in the previous question, RIP was not working on interface Fa0/0. Which of the following configuration commands would enable RIP on Fa0/0?

**a.** **network 3456::/64**

**b.** **network 3456::/16**

**c.** **network 3456::1/128**

**d.** **ipv6 rip enable**

**e.** **ipv6 rip tag1 enable**

**9.** Which of the following IPv4-to-IPv6 transition methods allows an IPv4-only host to communicate with an IPv6-only host?

**a.** Dual-stack

**b.** 6to4 tunneling

**c.** ISATAP tunneling

**d.** NAT-PT