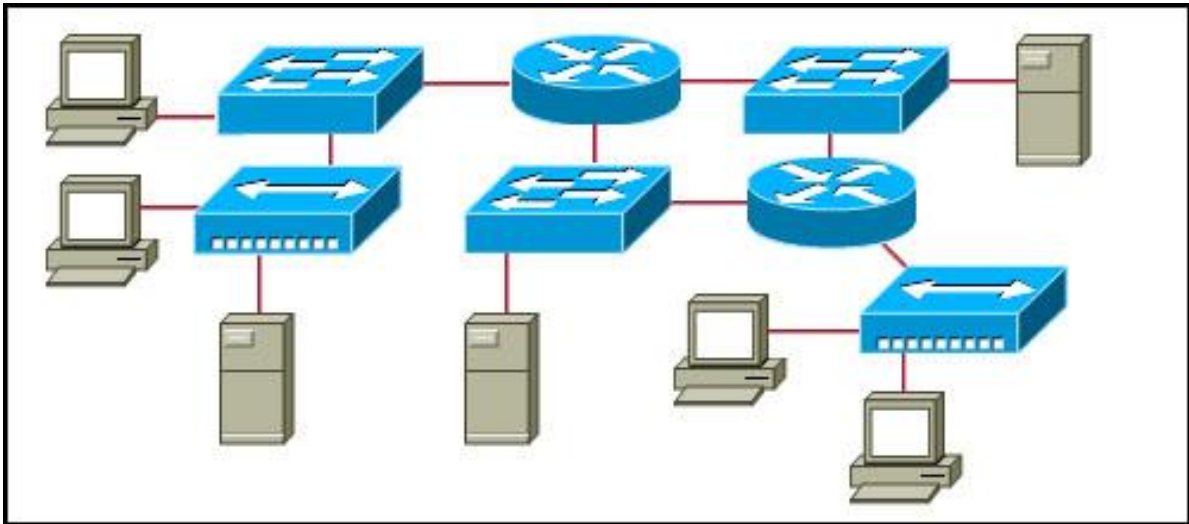


1.



Refer to the exhibit. All devices shown in the exhibit have factory default settings. How many broadcast domains are represented in the topology that is shown?

3

4

5

7

8

11

2. When the destination network is not listed in the routing table of a Cisco router, what are two possible actions that the router might take? (Choose two.)

The router sends an ARP request to determine the required next hop address.

The router discards the packet.

The router forwards the packet out the interface indicated by the default route entry.

The router forwards the packet toward the next hop indicated in the ARP table.

The router forwards the packet to the interface indicated by the source address.

3. Which IP packet field will prevent endless loops?

type-of-service

identification

flags

time-to-live

header checksum

4. What are the key factors to consider when grouping hosts into a common network? (Choose three.)

gateways

physical addressing

software version

geographic location

ownership

purpose

5. Which portion of the network layer address does a router use to forward packets?

broadcast address

network portion

host portion

gateway address

6. Which three statements are true about routes and their use? (Choose three.)

If no route to the destination network is found, the packet is returned to the previous router.

If multiple network entries exist for the destination network, the most general route is used to forward the

packet.

If the destination network is directly connected, the router forwards the packet to the destination host.

If no route exists for the destination network and a default route is present, the packet is forwarded to the next-hop router.

If the originating host has a default gateway configured, the packet for a remote network can be forwarded using that route.

If a host does not have a route manually configured for the destination network, the host will drop the packet.

7. In a connectionless system, which of the following is correct?

The destination is contacted before a packet is sent.

The destination is not contacted before a packet is sent.

The destination sends an acknowledgement to the source that indicates the packet was received.

The destination sends an acknowledgement to the source that requests the next packet to be sent.

8. What information is added during encapsulation at OSI Layer 3?

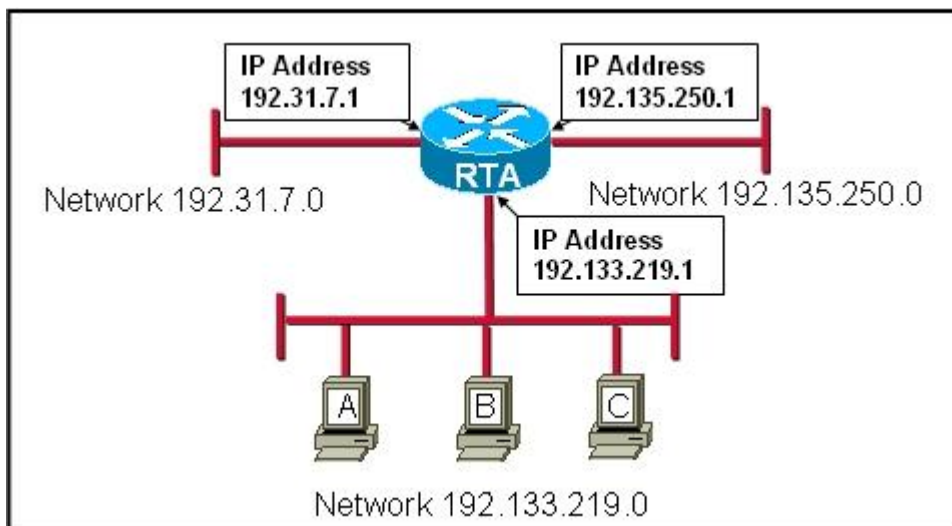
source and destination port number

source and destination IP address

source and destination MAC

Source and destination application protocol

- 9.



Refer to the exhibit. Using the network in the exhibit, what would be the default gateway address for host A in the 192.133.219.0 network?

192.135.250.1

192.31.7.1

192.133.219.0

192.133.219.1

10. What is a component of a routing table entry?

the destination host address

the MAC address of the interface of the router

the destination Layer 4 port number

the next-hop address

11. In an IPv4 environment, what information is used by the router to forward data packets from one interface of a router to another?

destination network address

source network address

source MAC address

well known port destination address

12. If the default gateway is configured incorrectly on the host, what is the impact on communications?

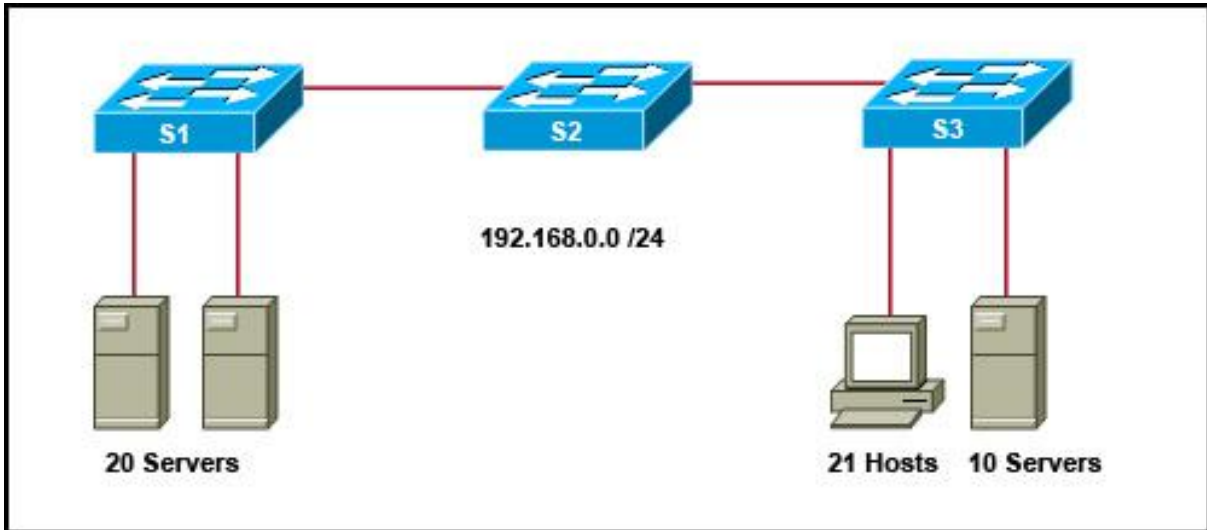
There is no impact on communications.

The host can communicate with other hosts on remote networks, but is unable to communicate with hosts on the local network.

The host can communicate with other hosts on the local network, but is unable to communicate with hosts on remote networks.

The host is unable to communicate on the local network.

13.



Refer to the exhibit. A network administrator notices that there are too many broadcasts on the network. What two steps can the network administrator take to resolve this problem? (Choose two.)

Replace S2 with a router.

Subnet the 192.168.0.0 /24 network.

Place all servers on S1.

Disable TCP/IP broadcasts.

Disable all unused interfaces on the switches.

14. Refer to the exhibit. The network in the exhibit is fully operational. What two statements correctly describe the routing for the topology that is shown? (Choose two.)

192.168.0.2 is the next-hop address that is used by R3 to route a packet from the 10.0.0.0 network to the 172.16.0.0 network.

10.0.0.1 is the next-hop address that is used by R1 to route a packet from the 192.168.12.0 network to the 10.0.0.0 network.

192.168.0.1 is the next-hop address that is used by R1 to route a packet from the 192.168.12.0 network to the 172.16.0.0 network.

172.16.0.1 is the next-hop address that is used by R3 to route a packet from the 10.0.0.0 to the 172.16.0.0 network.

192.168.0.1 is the next-hop address that is used by R2 to route a packet from the 172.16.0.0 network to the 192.168.12.0 network.

192.168.0.2 is the next-hop address that is used by R2 to route a packet from the 172.16.0.0 network to the 192.168.12.0 network.

15. What two characteristics are commonly associated with dynamic routing protocols? (Choose two.)

require no device configuration

provide routers with up-to-date routing tables

require less processing power than static routes require

consume bandwidth to exchange route information

prevent manual configuration and maintenance of the routing table

16. What is the purpose of a default gateway?
 physically connects a computer to a network
 provides a permanent address to a computer
 identifies the network to which a computer is connected
 identifies the logical address of a networked computer and uniquely identifies it to the rest of the network
identifies the device that allows local network computers to communicate with devices on other networks
- 17.

```
C:\Documents and Settings\administrator>netstat -r

Route Table

=====
Interface List
0x1 ..... MS TCP Loopback interface
0x2 ..00 16 76 d5 2c 14 ..... Intel(R) 82566DC Gigabit Network Connection - Packet Scheduler Miniport
=====
=====
Active Routes:
Network Destination        Netmask          Gateway          Interface        Metric
0.0.0.0                    0.0.0.0          10.10.10.6       10.10.10.26      20
10.10.10.0                 255.255.255.0   10.10.10.26     10.10.10.26      20
10.10.10.26                255.255.255.255 127.0.0.1        127.0.0.1        20
10.255.255.255            255.255.255.255 10.10.10.26     10.10.10.26      20
127.0.0.0                  255.0.0.0        127.0.0.1        127.0.0.1        1
224.0.0.0                  240.0.0.0        10.10.10.26     10.10.10.26      20
255.255.255.255          255.255.255.255 10.10.10.26     10.10.10.26      1
Default Gateway:          10.10.10.6
=====
Persistent Routes:
None
```

Refer to the exhibit. A network administrator is troubleshooting a connectivity problem and needs to determine the address that is used to forward network packets out the network. Using the netstat -r command, the administrator would identify which address as the address to which all hosts send packets that are destined for an outside network?

- 10.10.10.26
- 127.0.0.1
- 10.10.10.6**
- 10.10.10.1
- 224.0.0.0

18. What statement describes the purpose of a default route?
 A host uses a default route to transfer data to another host on the same network segment.
 A host uses a default route to forward data to the local switch as the next hop to all destinations.
 A host uses a default route to identify the Layer 2 address of an end device on the local network.
A host uses a default route to transfer data to a host outside the local network when no other route to the destination exists.
19. What type of routing uses information that is manually entered into the routing table?
 dynamic
 interior
static
 standard
20. Which intermediary devices could be used to implement security between networks? (Choose two.)
router
 hub

switch

firewall

access point

bridge

21. What are three common problems with a large network? (Choose three.)

too few broadcasts

performance degradation

security issues

limited management responsibility

host identification

protocol compatibility