

1. What is the function of the shell in an OS? (1 Degree)

- It interacts with the device hardware.
- It interfaces between the users and the kernel.
- It provides dedicated firewall services.
- It provides the intrusion protection services for the device.

2. On which switch interface would an administrator configure an IP address so that the switch can be managed remotely? (1 Degree)

- VLAN 1
- FastEthernet0/1
- vty 0
- console 0

3. Which name is assigned to the Data Link layer MAC? (1 Degree)

- bits
- data
- frame
- packet
- segment

4. How many bits are in an IPv4 address? (1 Degree)

- 23
- 64
- 128
- 32

5. What does the IP address 172.28.0.0/21 represent? (1 Degree)

- network address
- multicast address
- host address
- broadcast address

6. What information is added during encapsulation at OSI Layer 3? (1 Degree)

- source and destination MAC
- source and destination IP address
- source and destination application protocol
- source and destination port number

7. Passwords can be used to restrict access to all or parts of the Cisco IOS. Select the modes and interfaces that can be protected with passwords. (Choose three.) (3 Degree)

- Ethernet interface
- VTY interface
- console interface
- boot IOS mode
- router configuration mode
- privileged EXEC mode

8. What benefit does DHCP provide to a network? (1 Degree)

- Hosts always have the same IP address and are therefore always reachable.
- DHCP allows users to refer to locations by a name rather than an IP address.
- Hosts can connect to the network and get an IP address without manual configuration.
- Duplicate addresses cannot occur on a network that issues dynamic addresses using DHCP and has static assignments.

9. How many hosts are addressable on a network that has a mask of 255.255.255.128? (2 Degree)

- 127
- 126
- 128
- 64
- 32
- 254

10. What subnet mask is represented by the slash notation/19? (1 Degree)

- 255.255.224.0
- 255.255.255.0
- 255.255.242.0
- 255.255.248.0
- 255.255.192.0

11. Which three addresses are valid public addresses? (Choose three) (3 Degrees)

- 198.133.219.17
- 192.168.1.245
- 10.15.250.5
- 128.107.12.117
- 192.15.301.240
- 64.104.78.227

12. Which subnet would include the address 192.168.1.96 as a usable host address? (1 Degree)

- 192.168.1.64/26
- 192.168.1.32/27
- 192.168.1.32/28
- 192.168.1.64/29

13. Which of these addresses is the shortest abbreviation for the IP address: 3FFE:1044:0000:0000:A14B:0000:0000:70C5? (1 Degree)

- 3FFE:1044:0000::A14B::70C5
- 3FFE:1044::A14B::0000:70C5
- 3FFE:1044::A14B:0000:0000:70C5
- 3FFE:1044::A14B::70C5

14. Refer to the exhibit. A network technician is testing connectivity in a new network. Based on the test results shown in the exhibit, which device does the technician have connectivity with and which device does the technician not have connectivity with? (Choose two.) (2 Degrees)

```

Command Prompt
PC>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
Request timed out.
Reply from 192.168.1.2: bytes=32 time=0ms TTL=255
Reply from 192.168.1.2: bytes=32 time=0ms TTL=255
Reply from 192.168.1.2: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>ping 192.168.1.21
Pinging 192.168.1.21 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.21:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>
    
```

- connectivity: switch 2
- connectivity: PC-D
- connectivity: PC-B
- no connectivity: switch 1
- no connectivity: switch 2
- no connectivity: PC-C

15. What is a characteristic of Carrier Sense Multiple Access/Collision Detection (CSMA/CD) (Choose two) (2 Degrees).

- Does not detect collisions but attempts to avoid them by waiting before transmitting.
- Detect the collision on the network.
- Uses a method to detect if the media is clear.
- Data sent by both devices will be corrupted

16. How is SSH different from Telnet? (1 Degree)

- SSH makes connections over the network, whereas Telnet is for out-of-band access.
- SSH provides security to remote sessions by encrypting messages and using user authentication, Telnet is considered insecure and sends messages in plaintext.
- SSH requires the use of the PuTTY terminal emulation program. Tera Term must be used to connect to devices through the use of Telnet.
- SSH must be configured over an active network connection, whereas Telnet is used to connect to a device from a console connection.

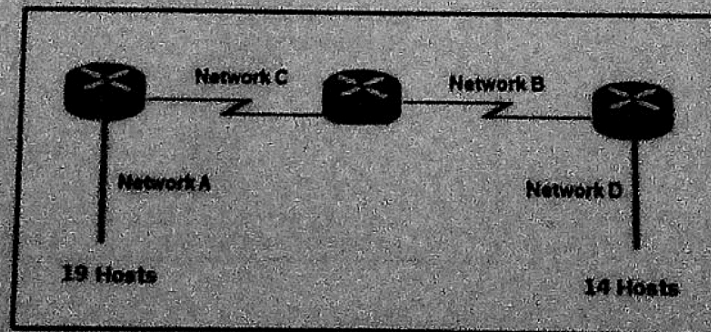
17. What is the data transfer method that allows the transmission of information to be sent and received but not at the same time? (1 Degree)

- full duplex
- half duplex
- multiplex
- simplex

18. Which three layers of the OSI model map to the application layer of the TCP/IP model? (Choose three.) (3 Degrees)

- application
- network
- data link
- session
- presentation
- transport

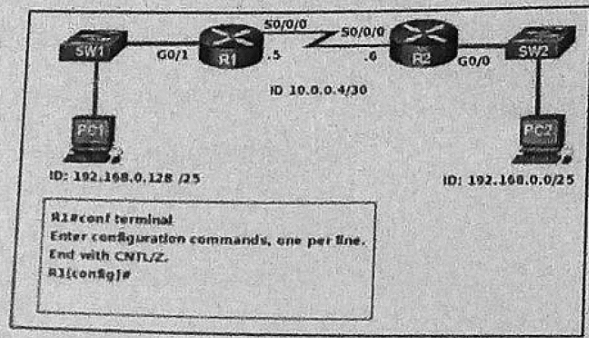
19. Refer to the exhibit. Given the network address of 192.168.5.0 and a subnet mask of 255.255.255.224, how many total host addresses are unused in the assigned subnets? (1 Degree)



- 77
- 78
- 64
- 83
- 72

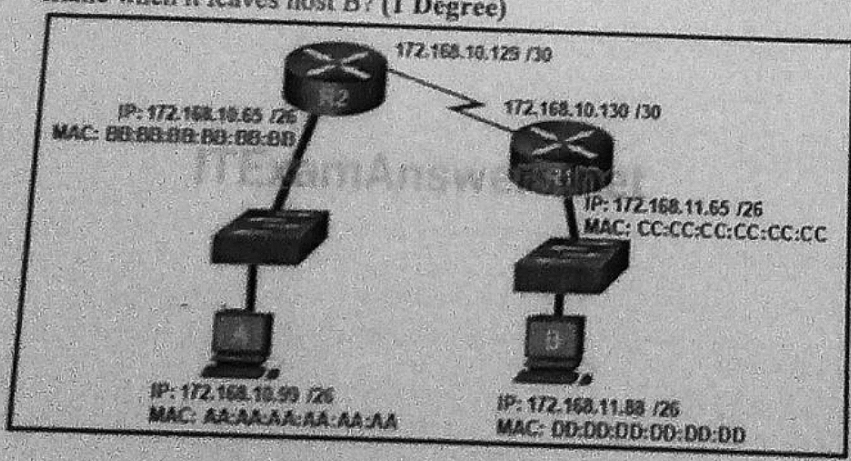
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20. Refer to the exhibit. Which two static route commands must be configured to allow communications between the 192.168.0.0/25 and 192.168.0.128/25 networks? (Choose two.) (2 Degrees)
- R1(config)# ip route 192.168.0.128 255.255.255.128 10.0.0.6
 - R1(config)# ip route 192.168.0.0 255.255.255.128 10.0.0.5
 - R1(config)# ip route 192.168.0.0 255.255.255.128 10.0.0.6
 - R2(config)# ip route 192.168.0.128 255.255.255.128 10.0.0.6
 - R2(config)# ip route 192.168.0.0 255.255.255.128 10.0.0.5
 - R2(config)# ip route 192.168.0.128 255.255.255.128 10.0.0.5

21. Refer to the exhibit. If host B sends an IP packet to host A, what will the destination address be in the frame when it leaves host B? (1 Degree)



- DD:DD:DD:DD:DD:DD
- 172.168.10.99
- CC:CC:CC:CC:CC:CC
- 172.168.10.65
- BB:BB:BB:BB:BB:BB
- AA:AA:AA:AA:AA:AA

22. A network administrator is configuring access control to Router R1. If the administrator uses Telnet to connect to the Router, which commands is needed to set password access user EXEC mode? (2 Degrees)

- A
 - R1(config)#enable password class123
 - R1(config)#line vty 4 0
 - R1(config-line)#password cisco12345
 - R1(config-line)#login
- B
 - R1(config)#enable password class123
 - R1(config)#line vty 0 4
 - R1(config-if)#password cisco12345
 - R1(config-line)#login
- C
 - R1(config)#enable password class123
 - R1(config)#line console 0
 - R1(config-line)#password cisco12345
 - R1(config-line)#login
- D
 - R1(config)#line vty 0 4
 - R1(config-line)#password cisco_12345
 - R1(config-line)#login

23. Regarding OSI network model fill the following table (7 Degrees)

Layer no	Layer Name	Operation	Answer
7		Logical addressing	
6		Port number	
5		Physical addressing	
4		Translate to machine language	
3		User layer	
2		opening, closing and managing a connection	
1		Transmission Media	