

## Cisco CCNA 4 final exam



College of Electronic Technology - Tripoli, Libya  
Department of Computer  
Cisco CCNA4 final exam  
No. of questions 55, total marks 40  
Time is 120 min.

Good luck )  
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## Exam A

### QUESTION 1

A small company with 10 employees uses a single LAN to share information between computers. Which type of connection to the Internet would be appropriate for this company?

- A. a dialup connection that is supplied by their local telephone service provider
- B. Virtual Private Networks that would enable the company to connect easily and securely with employees
- C. private dedicated lines through their local service provider
- D. a broadband service, such as DSL, through their local service provider

### QUESTION 2

Which statement describes a characteristic of a WAN?

- A. A WAN operates within the same geographic scope of a LAN, but has serial links.
- B. WAN networks are owned by service providers.
- C. All serial links are considered WAN connections.
- D. A WAN provides end-user network connectivity to the campus backbone

### QUESTION 3

Which connectivity method would be best for a corporate employee who works from home two days a week, but needs secure access to internal corporate databases?

- A. cable
- B. DSL
- C. VPN
- D. WiMAX

### QUESTION 4

What can cause a reduction in available bandwidth on a cable broadband connection?

- A. smaller cells
- B. number of subscribers
- C. CIR
- D. Internet Speed

### QUESTION 5

A corporation is looking for a solution to connect multiple, newly established remote branch offices. Which consideration is important when selecting a private WAN connection rather than a public WAN connection?

- A. Cost
- B. CIR/MIR
- C. Security during transfer
- D. web browsing

### QUESTION 6

Which WAN technology establishes a dedicated point-to-point connection between two sites?

- A. X25

- B. Frame Relay
- C. MPLS
- D. Leased Line

**QUESTION 7**

Which Part of the PPP protocol communicates with different network layer protocols?

- A. by negotiating with the network layer protocol
- B. by encoding the information field in the PPP frame
- C. by specifying the protocol during link establishment through LCP
- D. by using NCPs

**QUESTION 8**

When configuring Multilink PPP, where is the IP address for the multilink bundle configured?

- A. on a physical serial interface
- B. on a subinterface
- C. on a multilink interface
- D. on a Tunnel interface

**QUESTION 9**

Refer to the exhibit.

A network administrator is configuring the PPP link between the two routers. However, the PPP link cannot be established. Based on the partial output of the show running-config command, what is the cause of the problem?

Case Study Title (Case Study):

```
ISP(config)# show running-config
<output omitted>

username BORDER password 0 Cisco
!
interface Serial10/0/0
 ip address 209.165.200.226 255.255.255.252
 encapsulation ppp
 ppp authentication chap

BORDER(config)# show running-config
<output omitted>

username ISP password 0 cisco
!
interface Serial10/0/0
 ip address 209.165.200.226 255.255.255.252
 encapsulation ppp
 ppp authentication chap
```

- A. The usernames do not match
- B. The passwords do not match.

- C. The passwords should be longer than 8 characters
- D. The interface IP addresses are in different subnets

**QUESTION 10**

How much total bandwidth is provided by a E1 line?

- A. 2 Mbps
- B. 1.544 Mbps
- C. 64 kbps
- D. 43.736 Mbps

**QUESTION 11**

What are three components of PPP? (Choose three.) ?

- A. PPPoE
- B. authorization
- C. LCP
- D. parallel communications
- E. NCP
- F. HDLC-like framing

**QUESTION 12**

Which range represents all the IP addresses that are affected when network 10.120.160.0 with a wildcard mask of 0.0.7.255 is used in an ACE?

- A. 10.120.160.0 to 10.127.255.255
- B. 10.120.160.0 to 10.120.167.255
- C. 10.120.160.0 to 10.120.168.0
- D. 10.120.160.0 to 10.120.191.255

**QUESTION 13**

Which range represents all the IP addresses that are affected when network 10.120.1.0 with a wildcard mask of 0.0.3.255 is used in an ACE?

- A. 10.120.160.0 to 10.120.191.255
- B. 10.120.0.0 to 10.120.3.255
- C. 10.120.0.0 to 10.120.7.255
- D. 10.120.1.0 to 10.120.3.255

**QUESTION 14**

What two functions describe uses of an access control list? (Choose Three.)

- A. ACLs assist the router in determining the best path to a destination
- B. ACLs provide a basic level of security for network access.
- C. ACLs can control which areas a host can access on a network
- D. ACLs can permit or deny traffic based upon the MAC address originating on the router.
- E. ACLs can be used to define a range of hosts who can access Internet
- F.

### QUESTION 15

Which two statements describe the effect of the access control list wildcard mask 0 0 0 15? (Choose two.)

- A. The first 28 bits of a supplied IP address will be ignored.
- B. The last four bits of a supplied IP address will be ignored.
- C. The first 32 bits of a supplied IP address will be matched.
- D. The first 28 bits of a supplied IP address will be matched.
- E. The last five bits of a supplied IP address will be ignored.
- F. The last four bits of a supplied IP address will be matched.

### QUESTION 16

refer to the exhibit ! A network administrator is configuring an ACL to limit the connection to R1 vty lines to only the IT group workstations in the network 192.168.24.0/28. The administrator verifies the successful Telnet connections from a workstation with IP 192.168.24.5 to R1 before the ACL is applied. However, after the ACL is applied to the interface Fa0/0, Telnet connections are denied. What is the cause of the connection failure?

Case Study Title (Case Study):

```
R1# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)# access-list 120 permit ip 192.168.20.0 0.0.3.255 10.0.10.0 0.0.0.255
R1(config)# access-list 120 permit tcp 192.168.22.0 0.0.0.15 10.0.10.0 0.0.0.15 eq 23
R1(config)# access-list 120 deny t ip any any
R1(config)# line vty 0 4
R1(config-line)# password admin-in
R1(config-line)# access-class 120 in
R1(config-line)# exit
R1(config)# interface fastEthernet 0/0
R1(config-if)# ip address 10.0.10.1 255.255.255.252
R1(config-if)# no shutdown
R1(config-if)# ip access-group 120 in
R1(config-if)# end
R1#

R1# show access-lists
Extended IP access list 120
  permit ip 192.168.20.0 0.0.3.255 10.0.10.0 0.0.0.255
  permit tcp 192.168.22.0 0.0.0.15 10.0.10.0 0.0.0.15 eq telnet
  deny ip any any (16 matches)
R1#
```

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- A. The permit ACE specifies a wrong port number.
- B. The enable secret password is not configured on R1.
- C. The IT group network is not included in the permit statement and matched by deny any.
- D. The permit ACE should specify protocol ip instead of tcp.

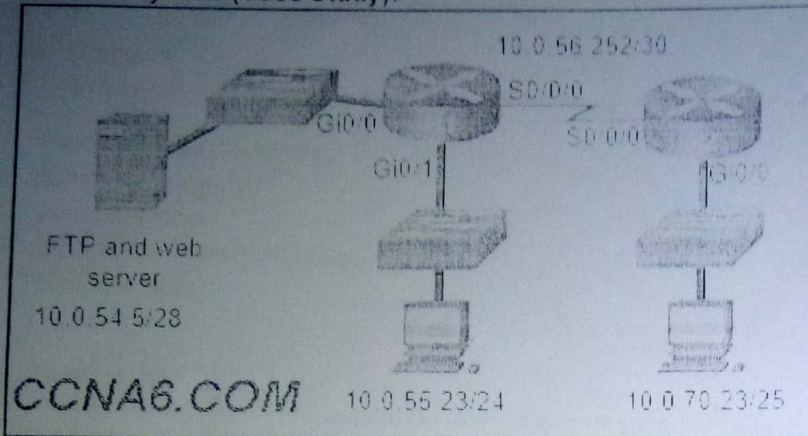
### QUESTION 17

Refer to the exhibit.

The network administrator that has the IP address of 10.0.70.23/25 needs to have access to the corporate FTP server (10.0.54.5/28). The FTP server is also a web server that is accessible to all internal employees on networks within the 10.x.x.x address. No other traffic should be allowed to this server. Which extended ACL

would be used to filter this traffic, and how would this ACL be applied? (Choose two )

**Case Study Title (Case Study):**



- A. access-list 105 permit ip host 10.0.70.23 host 10.0.54.5  
access-list 105 permit tcp any host 10.0.54.5 eq www  
access-list 105 permit ip any any
- B. access-list 105 permit tcp host 10.0.54.5 any eq www  
access-list 105 permit tcp host 10.0.70.23 host 10.0.54.5 eq 20  
access-list 105 permit tcp host 10.0.70.23 host 10.0.54.5 eq 21
- C. access-list 105 permit tcp host 10.0.70.23 host 10.0.54.5 eq 20  
access-list 105 permit tcp host 10.0.70.23 host 10.0.54.5 eq 21  
access-list 105 permit tcp 10.0.0.0 0.255.255.255 host 10.0.54.5 eq www  
access-list 105 deny ip any host 10.0.54.5  
access-list 105 permit ip any any
- D. R2(config)# interface gi0/0  
R2(config-if)# ip access-group 105 in
- E. R1(config)# interface gi0/0  
R1(config-if)# ip access-group 105 out
- F. R1(config)# interface s0/0/0  
R1(config-if)# ip access-group 105 out

**QUESTION 18**

A network administrator is designing an ACL. The networks 192.168.1.0/25, 192.168.0.0/25, 192.168.0.128/25, 192.168.1.128/26, and 192.168.1.192/26 are affected by the ACL. Which wildcard mask, if any, is the most efficient to use when specifying all of these networks in a single ACL permit entry?

- A. 0.0.0.127
- B. 0.0.0.255
- C. 0.0.1.255
- D. 0.0.255.255

**QUESTION 19**

Which Four values or sets of values are included when creating an extended access control list entry? (Choose Four )

- A. access list number between 1 and 99
- B. source or destination port
- C. destination address and wildcard mask

- D. source address and wildcard mask\*
- E. destination subnet mask and wildcard mask
- F. network protocol

**QUESTION 20**

Which two packet filters could a network administrator use on an IPv4 extended ACL? (Choose two.)

- A. destination MAC address
- B. ICMP message type
- C. computer type
- D. destination UDP port number
- E. computer type

**QUESTION 21**

Which two ACE commands will block traffic that is destined for a web server which is listening to default ports? (Choose two.)

- A. access-list 110 deny tcp any any eq 21
- B. access-list 110 deny tcp any any eq https
- C. access-list 110 deny tcp any any gt 443
- D. access-list 110 deny tcp any any gt 75
- E. access-list 110 deny tcp any any lt www

**QUESTION 22**

In applying an ACL to a router interface, which traffic is designated as outbound?

- A. traffic that is coming from the source IP address into the router
- B. traffic that is leaving the router and going toward the destination host
- C. traffic that is going from the destination IP address into the router
- D. traffic for which the router can find no routing table entry

**QUESTION 23**

Fill in the blanks. Use dotted decimal format.

The wildcard mask that is associated with the network 192.168.12.0/29 is \_\_\_\_\_

**QUESTION 24**

Which method is used by a PAT-enabled router to send incoming packets to the correct inside hosts?

- A. It uses the destination TCP or UDP port number on the incoming packet.
- B. It uses the source IP address on the incoming packet.
- C. It uses the source TCP or UDP port number on the incoming packet.
- D. It uses a combination of the source TCP or UDP port number and the destination IP address on the incoming packet.

**QUESTION 25**

What is RFC 1918 IP address ranges? (Choose Three)

- A. 10.0.0.0 – 10.255.255.255

- B. 172.16.0.0 - 172.31.255.255
- C. 192.168.0.0 - 192.168.255.255
- D. 19.254.0.0 - 169.254.255.255
- E. 192.169.1.0 - 192.169.255.255
- F. 209.200.0.0 - 209.200.255.255

**QUESTION 26**

Which command can be used to view the cable type that is attached to a serial interface?

- A. Router(config)# show interfaces
- B. Router(config)# show controllers
- C. Router(config)# show ip interface
- D. Router(config)# show ip interface brief

**QUESTION 27**

In which situation would the use of PAP be preferable to the use of CHAP?

- A. when router resources are limited
- B. when multilink PPP is used
- C. when plain text passwords are needed to simulate login at the remote host
- D. when a network administrator prefers it because of ease of configuration

**QUESTION 28**

Which is an advantage of using PPP on a serial link instead of HDLC?

- A. option for authentication
- B. higher speed transmission
- C. fixed-size frames
- D. option for session establishment

**QUESTION 29**

Which protocol responsible for initiating & terminating the PPP session?

- A. NCP
- B. LCP
- C. IPCP
- D. HDLC

**QUESTION 30**

Which two packet filters could a network administrator use on an IPv4 extended ACL? (Choose two.)

- A. destination MAC address
- B. ICMP message type
- C. computer type
- D. source TCP hello address
- E. destination UDP port number



**QUESTION 31**

Refer to the exhibit. Which address or addresses represent the inside global address?

Case Study Title (Case Study):

```
Router1(config)# ip nat inside source static 192.168.0.100 209.165.20.25
Router1(config)# interface serial0/0/0
Router1(config-if)# ip nat inside
Router1(config-if)# ip address 10.1.1.2 255.255.255.0
Router1(config)# interface serial 0/0/2
Router1(config-if)# ip address 209.165.20.25 255.255.255.0
Router1(config-if)# ip nat outside
```

- A. 10.1.1.2
- B. 169.254.209.128
- C. 192.168.0.100
- D. 209.165.20.25

**QUESTION 32**

A network administrator is configuring a static NAT on the border router for a web server located in the DMZ network. The web server is configured to listen on TCP port 8080. The web server is paired with the internal IP address of 192.168.5.25 and the external IP address of 209.165.200.230. For easy access by hosts on the Internet external users do not need to specify the port when visiting the web server. Which command will configure the static NAT?

- A. R1(config)# ip nat inside source static tcp 192.168.5.25 80 209.165.200.230 8080
- B. R1(config)# ip nat inside source static tcp 192.168.5.25 8080 209.165.200.230 80
- C. R1(config)# ip nat inside source static tcp 209.165.200.230 80 192.168.5.25 8080
- D. R1(config)# ip nat inside source static tcp 209.165.200.230 8080 192.168.5.25 80

**QUESTION 33**

Refer to the exhibit. Based on the output that is shown, what type of NAT has been implemented?

Case Study Title (Case Study):

```
R1# show ip nat translations
Pro Inside global      Inside local    Outside local   Outside global
tcp 209.165.200.225:1405 10.6.15.2:1405 209.165.202.141:80 209.165.202.141:80
tcp 209.165.200.225:1406 10.6.15.1:1406 199.51.100.3:80 199.51.100.3:80
```

- A. dynamic NAT with a pool of two public IP addresses
- B. PAT using an external interface
- C. static NAT with one entry
- D. static NAT with a NAT pool

**QUESTION 34**

What is the primary purpose of NAT?

- A. conserve IPv4 addresses
- B. increase network security
- C. allow peer-to-peer file sharing
- D. enhance network performance

**QUESTION 35**

What is a disadvantage of NAT?

- A. There is no end-to-end addressing.
- B. The router does not need to alter the checksum of the IPv4 packets.
- C. The costs of readdressing hosts can be significant for a publicly addressed network.
- D. The internal hosts have to use a single public IPv4 address for external communication.

**QUESTION 36**

Refer to the exhibit. What is the purpose of the command marked with an arrow shown in the partial configuration output of a Cisco broadband router?

Case Study Title (Case Study):

```
interface FastEthernet 0/0
 ip address 10.10.10.1 255.255.255.0
 ip nat inside
 no cdp enable
 hold-queue 32 in
 hold-queue 100 out
!
interface FastEthernet 0/1
 ip address dhcp
 ip nat outside
 no cdp enable
!
ip classless
ip http server
!
ip nat inside source list 102 interface fastethernet 0/1 overload
access-list 102 permit ip 10.10.10.0 0.0.0.255 any ←
no cdp run
!
```

- A. defines which addresses can be translated
- B. defines which addresses are allowed into the router
- C. defines which addresses are assigned to a NAT pool

D. defines which addresses are allowed out of the router

### QUESTION 37

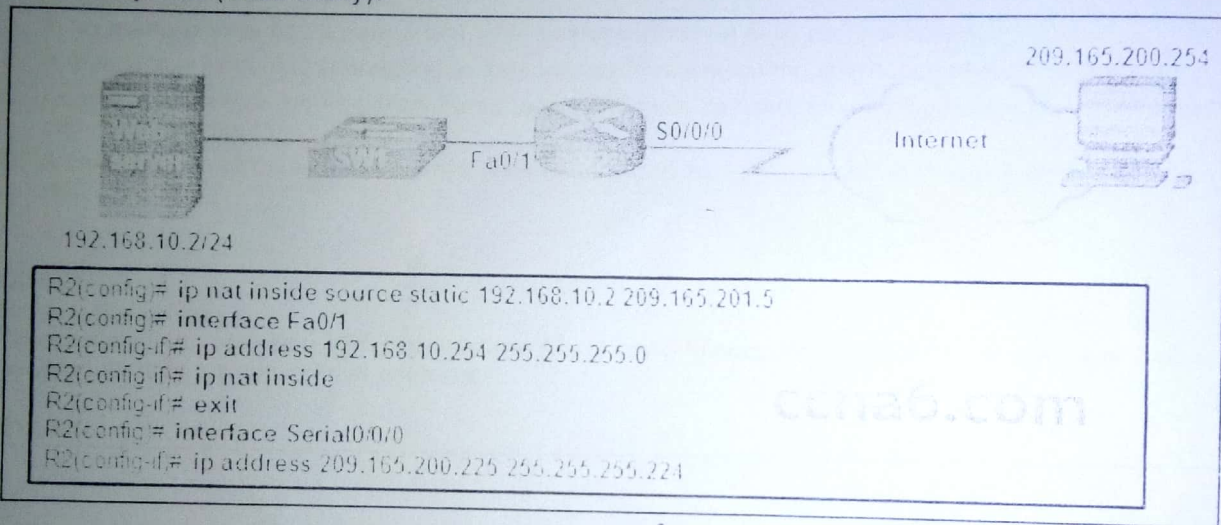
What are two of the required steps to configure PAT? (Choose two )

- A. Define a pool of global addresses to be used for overload translation.
- B. Create a standard access list to define applications that should be translated
- C. Identify the inside interface.
- D. Create a standard access list to define applications that should be translated.

### QUESTION 38

Create a standard access list to define applications that should be translated.

Case Study Title (Case Study):



- A. Interface Fa0/1 should be identified as the outside NAT interface.
- B. The IP NAT statement is incorrect.
- C. Interface S0/0/0 should be identified as the outside NAT interface.
- D. Interface Fa0/1 should be identified as the outside NAT interface.

### QUESTION 39

What is a component of an ADSL connection that is located at the customer site?

- A. DTE
- B. CPE
- C. SOHO
- D. DSLAM

### QUESTION 40

How can the use of VPNs in the workplace contribute to lower operating costs?

- A. High-speed broadband technology can be replaced with leased lines.
- B. VPNs can be used across broadband connections rather than dedicated WAN links.
- C. VPNs prevents connectivity to SOHO users.

D. VPNs require a subscription from a specific Internet service provider that specializes in secure connections

**QUESTION 41**

Which two statements describe a site-to-site VPN? (Choose two.)

- A. It connects entire networks to each other.
- B. It requires hosts to send TCP/IP traffic through a VPN gateway.
- C. It is used to connect individual hosts securely to a company network over the Internet.
- D. It may require VPN client software on hosts.
- E. users aren't aware a VPN exists.

**QUESTION 42**

Which two scenarios are examples of remote access VPNs? (Choose two.)

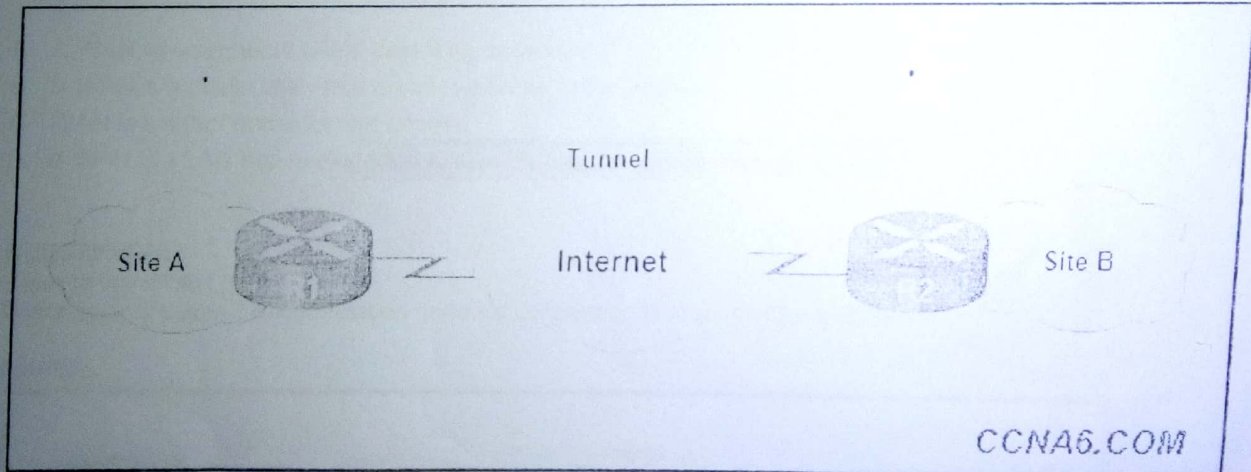
- A. A toy manufacturer has a permanent VPN connection to one of its parts suppliers.
- B. A mobile sales agent is connecting to the company network via the Internet connection at a hotel.
- C. An employee who is working from home uses VPN client software on a laptop in order to connect to the company network.
- D. A small branch office with three employees has a Cisco ASA that is used to create a VPN connection to the HQ.

**QUESTION 43**

Refer to the exhibit.

What solution can provide a VPN between site A and site B to support encapsulation of any Layer 3 protocol between the internal networks at each site?

Exhibit:



- A. an IPsec tunnel
- B. a remote access tunnel
- C. Cisco SSL VPN
- D. a GRE tunnel

**QUESTION 44**

Which Four statements are characteristics of generic routing encapsulation (GRE)? (Choose three.)

- A. GRE encapsulation supports both IPv4 and IPv6
- B. GRE is stateless.
- C. GRE does not have strong security mechanisms
- D. GRE provides flow control by default.
- E. GRE is the most secure tunneling protocol.
- F. GRE runs at port 47 at the Transport L4 layer

**QUESTION 45**

Which is a requirement of a site-to-site VPN?

- A. It requires a client/server architecture.
- B. It requires the placement of a VPN server at the edge of the company network
- C. It requires hosts to use VPN client software to encapsulate traffic
- D. It requires a VPN gateway at each site encrypt and decrypt traffic

**QUESTION 46**

What is the recommended technology to use over a public WAN infrastructure when a branch office is connected to the corporate site?

- A. ATM
- B. ADSL
- C. VPN
- D. Wi-Fi

**QUESTION 47**

Which statement best describes a WAN?

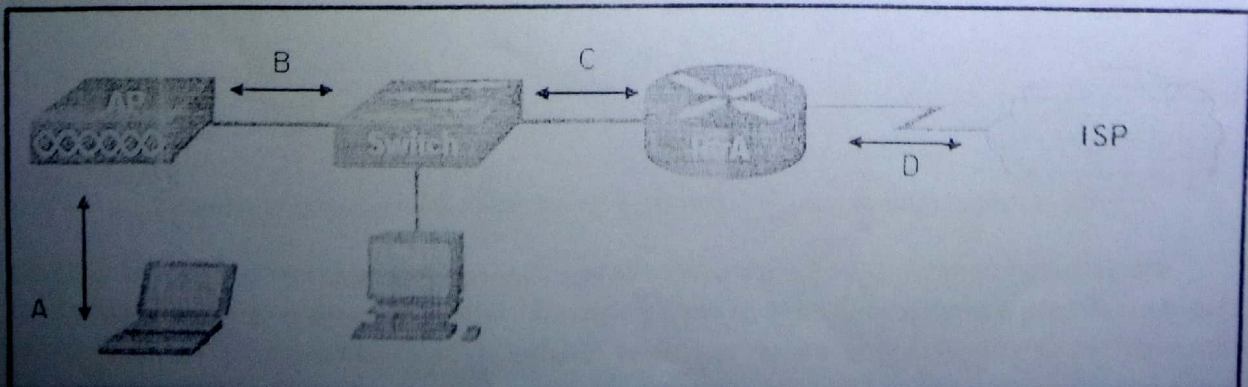
- A. A WAN interconnects LANs over long distances.
- B. A WAN is a public utility that enables access to the Internet.
- C. WAN is another name for the Internet.
- D. A WAN is a LAN that is extended to provide secure remote network access.

**QUESTION 48**

Refer to the exhibit.

Which type of Layer 2 encapsulation used for connection D requires Cisco routers?

Exhibit:



- A. Ethernet
- B. PPPOE
- C. HDLC
- D. PPP

**QUESTION 49**

Which three statements are true about PPP? (Choose three.)

- A. PPP can use synchronous and asynchronous circuits.
- B. PPP can only be used between two Cisco devices.
- C. PPP carries packets from several network layer protocols in LCPs.
- D. PPP uses LCPs to establish, configure, and test the data-link connection.
- E. PPP uses LCPs to agree on format options such as authentication, compression, and error detection.

**QUESTION 50**

What function is provided by Multilink PPP?

- A. spreading traffic across multiple physical WAN links
- B. dividing the bandwidth of a single link into separate time slots
- C. enabling traffic from multiple VLANs to travel over a single Layer 2 link
- D. creating one logical link between two LAN switches via the use of multiple physical links

**QUESTION 51**

Which IPv4 address range covers all IP addresses that match the ACL filter specified by 172.16.2.0 with wildcard mask 0.0.1.255?

- A. 172.16.2.0 to 172.16.2.255
- B. 172.16.2.1 to 172.16.3.254
- C. 172.16.2.0 to 172.16.3.255
- D. 172.16.2.1 to 172.16.255.255

**QUESTION 52**

Which two devices are needed when a digital leased line is used to provide a connection between the customer and the service provider? (Choose two.)

- A. Remote Access Server
- B. CSU
- C. DSU
- D. Dialup modem

**QUESTION 53**

What is an advantage of packet-switched technology over circuit-switched technology?

- A. Packet-switched networks are less susceptible to jitter than circuit-switched networks are.
- B. Packet-switched networks can efficiently use multiple routes inside a service provider network.
- C. Packet-switched networks do not require an expensive permanent connection to each endpoint.
- D. Packet-switched networks usually experience lower latency than circuit-switched networks experience.

**QUESTION 54**

Which WAN technology establishes a dedicated constant point-to-point connection between two sites?

- A. ATM
- B. MPLS
- C. ISDN
- D. Leased Lines
- E. Frame Relay

**QUESTION 55**

Which 2 options are correct

NAT is a way to let users access the internet. its usually done in the edge devices, like (choose two)

- A. Routers
- B. Firewalls
- C. Switches
- D. Servers