CCNA Exploration: Accessing the WAN (Version 4.0)

Chapter 6 – Teleworker Services

1 **Which two statements about DSL are true? (Choose two)**

- ☐ users are on a shared medium
- ☐ uses RF signal transmission
- ☑ local loop can be up to 3.5 miles (5.5km)
- ☐ physical and data link layers are defined by DOCSIS
- ☑ user connections are aggregated at a DSLAM located at the CO

2 **Which two Layer 1 requirements are outlined in the Data-over-Cable Service Interface Specification (DOCSIS)? (Choose two)**

- ☑ channel widths
- ☐ access method
- ☐ maximum data rate
- ☑ modulation techniques
- ☐ compression techniques

3 **Which two statements are valid solutions for a cable ISP to reduce congestion for users? (Choose two)**

- ☐ use higher RF frequencies
- ☑ allocate an additional channel
- ☑ subdivide the network to reduce users on each segment
- ☐ reduce the length of the local loop to 5.5 kilometers or less
- ☐ use filters and splitters at the customer site to separate voice from data traffic

4 **Data confidentiality through a VPN is achieved through which two methods? (Choose two)**

- ☐ digital certificates
- ☑ encryption
- ☑ encapsulation
- ☐ hashing
- ☐ passwords

5 **After conducting research to learn about common remote connection options for teleworkers, a network administrator has decided to implement remote access over broadband to establish VPN connections over the public Internet. What is the result of this solution?**

- ○ A reliable connection is established at greater speeds than what is offered from dialup over POTS. Security is increased, but username and password information are sent in plain text.
- ◉ The connection has increased security and reliable connectivity. Users need a remote VPN router or VPN client software.
- ○ Security and reliability are increased at a substantial loss in throughput, which is considered acceptable when supporting a single user environment.
- ○ Reliability and security are increased without the need for additional equipment, when compared to dialup connections using POTS.

6 **What are the three main functions of a secure VPN? (Choose three)**

- ☐ accounting
- ☑ authentication
- ☐ authorization
- ☐ data availability
- ☑ data confidentiality
- ☑ data integrity

7 **Which statement describes cable?**

- ⦿ Delivering services over a cable network requires downstream frequencies in the 50 to 860 MHz range, and upstream frequencies in the 5 to 42 MHz range.
- ○ The cable subscriber must purchase a cable modem termination system (CMTS)
- ○ Each cable subscriber has dedicated upstream and downstream bandwidth.
- ○ Cable subscribers may expect up to 27 Mbps of bandwidth on the upload path.

8 **Which two protocols can be used to encapsulate traffic that is traversing a VPN tunnel? (Choose two)**

- ☐ ATM
- ☐ CHAP
- ☑ IPsec
- ☐ IPX
- ☐ MPLS
- ☑ PPTP

9

Teleworker — Internet — HQ Office
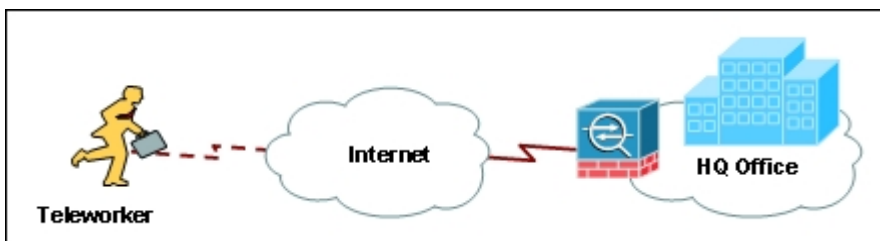
Refer to the exhibit. A teleworker is connected over the Internet to the HQ Office. What type of secure connection can be established between the teleworker and the HQ Office?

- ○ a GRE tunnel
- ○ a site-to-site VPN
- ⦿ a remote-access VPN
- ○ the user must be at the office location to establish a secure connection

10 **Data confidentiality through a VPN can be enhanced through the use of which three encryption protocols? (Choose three)**

- ☑ AES
- ☑ DES
- ☐ AH
- ☐ hash
- ☐ MPLS
- ☑ RSA

11 **A company is using WiMAX to provide access for teleworkers. What home equipment must the company provide at the teleworker's site?**

○ a WiMAX tower

○ a one-way multicast satellite

◉ a WiMAX receiver

○ an access point connected to the company WLAN

---

12 **Which two methods could an administrator use to authenticate users on a remote access VPN? (Choose two)**

☑ digital certificates

☐ ESP

☐ hashing algorithms

☑ smart cards

☐ WPA

---

13 **Which two features can be associated with the Worldwide Interoperability for Microwave Access (WiMAX) telecommunication technology? (Choose two)**

☐ supports municipal wireless networks utilizing mesh technologies

☑ covers areas as large as 7,500 square kilometers

☐ supports point-to-point links, but not full mobile cellular-type access

☑ connects directly to the Internet through high-bandwidth connections

☐ operates at lower speeds than Wi-Fi, but supports many more users

---

14 **While monitoring traffic on a cable network, a technician notes that data is being transmitted at 38 MHz. Which statement describes the situation observed by the technician?**

◉ Data is being transmitted from the subscriber to the headend.

○ Data is flowing downstream.

○ Cable television transmissions are interfering with voice and data transmissions.

○ The system is experiencing congestion in the lower frequency ranges.

---

16 **What two protocols provide data authentication and integrity for IPsec? (Choose two)**

☑ AH

☐ L2TP

☑ ESP

☐ GRE

☐ PPTP

---

17 **A technician has been asked to configure a broadband connection for a teleworker. The technician has been instructed that all uploads and downloads for the connection must use existing phone lines. Which broadband technology should be used?**

○ cable

◉ DSL

○ ISDN

○ POTS

15
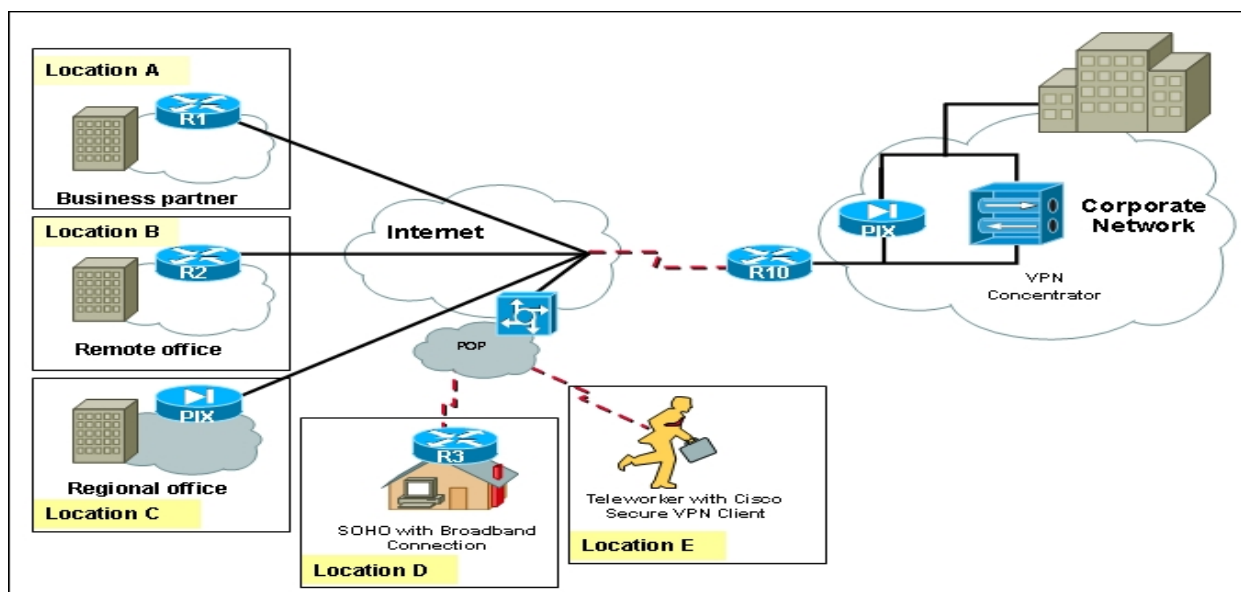
Refer to the exhibit. All users have a legitimate purpose and the necessary permissions to access the Corporate network. Based on the topology shown, which locations are able to establish VPN connectivity with the Corporate network?

○ Locations C, D, and E can support VPN connectivity. Locations A and B require an additional PIX Firewall appliance installed on the edge of the network.

○ Locations C and E can support VPN connectivity. Locations A, B, and D require an additional PIX Firewall appliance installed on the edge of the network.

○ Locations A, B, D, and E can support VPN connectivity. Location C requires an additional router on the edge of the network.

◉ All locations can support VPN connectivity.

18 **Which is an example of symmetric-key encryption?**

○ Diffie-Hellman

○ digital certificate

◉ pre-shared key

○ RSA signature

19
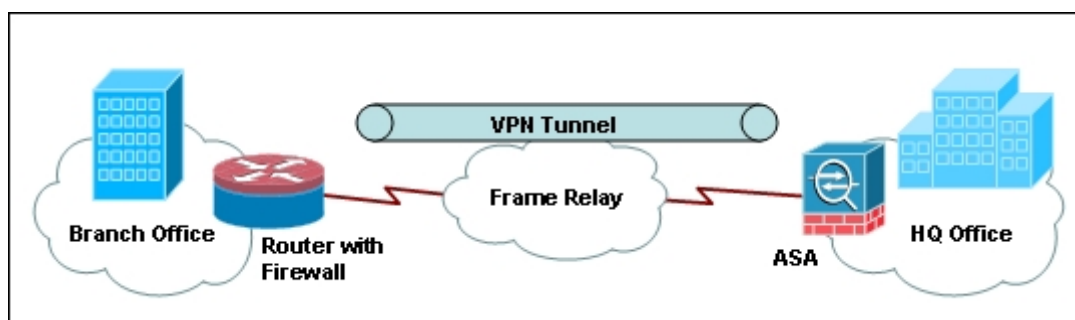
Refer to the exhibit. A VPN tunnel has been established between the HQ Office and the Branch Office over the public Internet. Which three mechanisms are required by the devices on each end of the VPN tunnel to protect the data from being intercepted and modified? (Choose three)

☐ The devices must use a dedicated Layer 2 connection.

☐ The devices must have the VPN client software installed.

☐ The two parties must inspect the traffic against the same ACLs.

☑ The two parties must establish a secret key used by encryption and hash algorithms.

☑ The two parties must agree on the encryption algorithm to be used over the VPN tunnel.

☑ The devices must be authenticated before the communication path is considered secure.