

ELITECERTIFY

Certification Study Guide



CompTIA

Demo

N10-003 CompTIA Network+

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QUESTION 1

You need to connect the 100BASE-TX NICs on two workstations with directly. Which cable could you use?

- A. Category 5 crossover cable
- B. Coaxial cable
- C. Category 3 straight cable
- D. Category 5 straight cable

Answer: A

Both workstations' NIC will be physically and electronically the same as a medium dependent interface (MDI), therefore, you need a crossover cable to connect the two together. 100BASE-TX uses twisted pair cable as indicated by the T in 100BASE-TX. 100Base-T has a transmission speed of up to 100 Mbps. The minimum twisted-pair, copper cable that can support these speeds are Category 5 cable.

Incorrect Answers:

B: 100BASE-TX uses twisted pair cable as indicated by the T in 100BASE-TX, not coaxial cable.

C: Straight cable can connect a workstation on a 100BASE-TX network to hub, router, or switch. However, a crossover cable is required to connect two client workstations directly. Furthermore, Category 3 cable is rated at only

10 Mbps and is used in 10BASE-T.

D: Straight cable can connect a workstation on a 100BASE-TX network to hub, router, or switch, which would have medium dependent interface-crossover (MDI-X) port. However, a crossover cable is required to connect two client workstations directly as the two workstations will have similar medium dependent interfaces (MDIs).

References:

David Groth and Toby Skandier, Network+ Study Guide (4th Edition), Sybex, Alameda CA, 2005, pp. 20-21, 23, 144, 290-292, 436-437.

QUESTION 2

What is the minimum cable type required for 100BASE-TX?

- A. 50 ohm coaxial cable
- B. Category 3 UTP (Unshielded Twisted Pair)
- C. Category 6 UTP (Unshielded Twisted Pair)
- D. Category 5 UTP (Unshielded Twisted Pair)

Answer: D

100BASE-TX requires a UTP cable that can support transmission speeds of up to 100 Mbps. The minimum UTP cable that supports transmission speeds of up to 100 Mbps is Category 5 cable.

Incorrect Answers:

A: 50 ohm coaxial cable is called RG-58. This is thinnet cable that is used for 10BASE-2.

B: Category 3 cable has a maximum transmission speed to 10 Mbps.

C: Category 6 cable supports transmission speeds of up to 1000 Mbps and can be used for 100BASE-TX. However,

Category 5 cable which has a maximum transmission speed of 100 Mbps can also be used. Reference:

David Groth and Toby Skandier, Network+ Study Guide (4th Edition), Sybex, Alameda CA, 2005, pp. 20-21.

QUESTION 3

Which of the following media types does 100BASE-FX require?

- A.RG-8(Radio Grade) coaxial cable
- B.RG-58 (Radio Grade) coaxial cable
- C.MMF (Multimode Fiber) optic cable
- D.UTP (Unshielded Twisted Pair) cable

Answer: C

Explanation:

In 100BASE-FX,F stands for fiber. Thus, 100BASE-FX requires fiber optic cable.

Incorrect Answers:

A:RG-8 coaxial cable is called Thicknet and isrequiredfor 10BASE-5, not 100BASE-FX.

B:RG-58 coaxial cable is called Thinnet and is required for 10BASE-2,not 100BASE-FX. D:UTP is required for 10BASE-T,100BASE-T,100BASE-TX,etc, not 100BASE-FX. Reference:

David Groth and Toby Skandier,Network+ Study Guide(4th Edition), Sybex,AlamedaCA, 2005, pp. 1731.

QUESTION 4

If a destination address is not in a bridge forwarding table, what will the bridge do?

- A.Forwarding the packets to a designated port and the one that originated the request
- B.Forward the packets to all ports except the one that originated the request
- C.Forward the packets to the default gateway
- D.Forward the packet to all ports

Answer: D

Bridges read each frame as it passes through it. It then puts the source hardware address in a forwarding table and

keeps track of which port the frame was received on, to determine the location of the sending device. Once a forwarding table is built, the bridge will only forward frames to the segment where the destination hardware address is located. If the destination device is on the same segment as the frame, the bridge will block the frame from going to any other segments. If the destination address is on a different segment, the frame will only be transmitted to that segment. However, if the destination address is not on bridge's forwarding table, it broadcasts the packet through all ports.

References:

Todd Lammle,CCNA: Cisco Certified Network Associate Study Guide(4th Edition), Sybex,AlamedaCA, 2004, pp. 20-21.

QUESTION 5

Which of the following options transmit data over a modem? (Select three)

- A.POTS/PSTN (Plain Old Telephone System/Public Switched Telephone Network)

-
- B.xDSL (Digital Subscriber Line)
 - C.cable
 - D.T1 (T-Carrier Level 1)

Answer: A, B, C

T1 is a dedicated point-to-point link while POTS/PTSN, xDSL and cable all require a modem to modulate the digital data onto an analog carrier for transmission over an analog line and then demodulate from the analog carrier to a digital signal again at the receiving end.

References:

David Groth and Toby Skandier, Network+ Study Guide (4th Edition), Sybex, Alameda CA, 2005, pp. 34-35, 286-294.

QUESTION 6

You have purchased a cable modem and a straight-through Category 5e patch cable from a local electronics store. You connect the cable modem to your computer via a hub which is already connected to your computer. However, your computer is not able to receive a DHCP address from the cable modem network DHCP server. What is the most likely cause of this problem?

- A. The cable modem must be directly connected to a computer.
- B. The cable modem requires a crossover cable to connect to the hub.
- C. The cable modem requires a RG-6 coaxial cable to connect to a hub.
- D. The cable modem must use a Category 3 UTP cable to connect to a hub.

Answer: B

The cable modem's Ethernet connection is physically and electronically the same as a medium dependent interface-crossover (MDI-X) port on the hub, therefore, you need a crossover cable to connect the cable modem to the hub, and not a straight-through cable.

Incorrect Answers:

A: We can connect a cable modem to a computer via a hub. However, the cable modem's Ethernet connection is physically and electronically the same as a medium dependent interface-crossover (MDI-X) port on the hub, therefore, you need a crossover cable to connect the two.

C: Cable modems are either Ethernet based, which would require twisted pair cable, or USB to connect to the computer. This can be either directly, or via a hub or switch. The cable receives its signals via an RG-6 cable that

connects to the wall socket, which feeds into the cable from the cable provider.

D: A Category 5e cable is backward compatible with a Category 3 cable. Therefore, changing to a Category 3 cable will not resolve the problem. The problem here is that the ports on both the cable modem and the hub are physically and electronically the same as a medium dependent interface-crossover (MDI-X) port on the hub, therefore, we need a crossover cable to connect the two. References:

David Groth and Toby Skandier, Network+ Study Guide (4th Edition), Sybex, Alameda CA, 2005, pp. 290-292, 436-437.

QUESTION 7

Which of the following are required to connect an 802.3 network to an 802.11 network?

- A.CSU / DSU (Channel Service Unit / Data Service Unit)
- B.WAP (Wireless Access Point)
- C.ISDN (Integrated Services Digital Network) adapter
- D.PVC (Permanent Virtual Circuit)

Answer: B

802.3 is an Ethernet LAN while 802.11 is the Wireless version of Ethernet. A WAP is used to connect a Wireless network to a LAN. Incorrect Answers:

A:CSU / DSU is a device that connects a digital carrier line, such as the Tseries or the DDS line to your network.

C:An ISDN adapter is a device that connects your network to the Internet.

D:PVC is used in Frame Relay to ensure that all data that enters a Frame Relay cloud at one side comes out at the

other over a similar connection.

Reference:

David Groth and Toby Skandier,Network+ Study Guide(4th Edition), Sybex,AlamedaCA, 2005, p. 63-69,293.

QUESTION 8

A EliteCertify employee requires remote access to the company network. The employee has access to the PSTN (Public Switched Telephone Network) which supports standard analog signaling. Which device will allow the employee to connect to the company network via remote access?

- A.Gateway
- B.Router
- C.ISDN (Integrated Services Digital Network)
- D.Modem

Answer: D

A modem can connect two computers over an analog telephone line.

Incorrect Answers:

A:A Gateway is a combination of software and a hardware device that can interconnect two dissimilar networks.

B:A Router is a network device that can interconnect two or more network segments.

C:ISDN is similar to a modem but does not accept analog signals and thus cannot accept dial-up signals which are

analog. Reference:

David Groth and Toby Skandier,Network+ Study Guide(4th Edition), Sybex,AlamedaCA, 2005, pp. 33-35, 284.

QUESTION 9

Which of the following can be used to connect a LAN (Local Area Network) to mainframe?

- A.bridge
- B.gateway
- C.transceiver
- D.firewall

Answer: B

A LAN and a mainframe are two dissimilar networks. A gateway is used to connect two dissimilar networks.

Incorrect Answers:

A:A bridge connects two similar network segments and keeps traffic separated on both sides of the bridge. It does not

connect two dissimilar networks.

C:A transceiver allows a networking device to connect to a different type of media than it was designed for. It is not

used to connect networks.

D:A firewall protects the LAN from attackers on the Internet. It is not used to connect networks. References: David Groth and Toby Skandier,Network+ Study Guide(4th Edition), Sybex,AlamedaCA, 2005, pp. 33, 36-37.