Exam Report: 6.2.7 Practice Questions

Date: 3/16/2020 11:05:56 pm
Time Spent: 11:18

Candidate: Garsteck, Matthew
Login: mGarsteck

Overall Performance

Your Score: 100%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Correct

A customer is upgrading the routers and switches in their network. The signal source in these network devices is a light-pulse.

Which of the following network cabling options is MOST likely being used in this upgrade?

- Fiber optic
- Twisted pair
- Copper
- Wireless

Explanation

The signal source used with Fiber optic cables is a light pulses. Fiber optic cabling can be a laser, but most often, it is an LED

The signal source used with wireless networks is radio waves or infrared waves.

The signal in twisted pair cabling is an electric signal and is not produced by an LED.

The signal in copper cabling is an electric signal and is not produced by an LED.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_COMPARE_CABLING_02]

Question 2: Correct

Currently, the users in your company are required to use their IP addresses when connecting to other hosts. Since IP addresses are difficult to remember, you want to implement a protocol on your network that allows computers to automatically find another host's IP address using a logical name.

Which of the following protocols would be the BEST to implement?

- Telnet
- ARP
- DNS
- DHCP

Explanation

Domain Name System (DNS) is an internet service that translates domain names into IP addresses. Because domain names are alphabetic, they're easier to remember. For example, the name www.mydomain.com would be identified with a specific IP address.

ARP is a protocol for finding the IP address from a known MAC address. DHCP is a protocol used to assign IP addresses to hosts. Telnet is a remote management utility.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_DNS]

Question 3: Correct

A technician determines that an older network hub that connects 24 workstations is performing poorly due to excessive network collisions.

Which of the following network devices would be the BEST replacement?

- Patch panel
- Bridge
- Router
- Switch

Explanation

A switch maintains a table of MAC addresses by port and forwards network frames to only the port that matches the MAC address. This significantly reduces collisions.

A router manages IP traffic between networks.

A bridge separates two network segments and forwards frames from one segment to another.

A patch panel organizes network cables and connects inbound and outbound cables.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_NETWORK_DEVICES_01]

Question 4: Correct

Which of the following LAN devices receives a signal on one port and forwards that signal only to the port where the destination device is connected?

- Router
- Network adapter
- Switch
- Hub

Explanation

A switch offers guaranteed bandwidth to each port, unlike a hub, which shares bandwidth among all the network ports.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_NET_DEVICE_04]

Question 5: Correct

Which of the following best describes how a switch functions?

- It connects multiple segments of different architectures. It translates frames and broadcasts them to all of its ports.
- It connects multiple cable segments or devices and broadcasts frames to all of its ports.

- It connects multiple segments of different architectures. It translates frames and forwards them to the appropriate segment.
- ➡ It connects multiple cable segments or devices and forwards frames to the appropriate segment.

Explanation

Switches have multiple ports and can connect multiple segments or devices. The switch forwards frames to the appropriate port. They function similarly to a hub except, instead of sending packets to all ports, switches send packets only to the destination computer's port.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_NET_DEVICE_05]

Question 6: Correct

Which of the following hardware devices regenerates a signal out all connected ports without examining the frame or packet contents?

- Bridge
- ➡ Hub
- Gateway
- Switch
- Router

Explanation

A hub and a repeater send received signals out all other ports. These devices do not examine the frame or the packet contents. A switch or a bridge use the MAC address in a frame for forwarding decisions. A router uses the IP address in a packet for forwarding decisions.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_NET_DEVICE_06]

Question 7: Correct

How do switches and bridges learn where devices are located on a network?

- ➡ When a frame enters a port, the source MAC address is copied from the frame header.
- When a frame enters a port, the destination MAC address is copied from the frame header.
- When a frame enters a port, the destination IP address is copied from the frame header.
- When a frame enters a port, the source IP address is copied from the frame header.

Explanation

Bridges and switches learn addresses by copying the MAC address of the source device and placing it into the MAC address table. The port number the frame entered is also recorded in the table and associated with the source MAC address. The switch or the bridge cannot record the destination MAC address because it does not know the port that is used to reach the destination device. Bridges and switches operate at Layer 2 and do not use IP addresses (which exist at Layer 3).

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_NET_DEVICE_07]

Question 8: Correct

You are the network technician for a small company. One of your responsibilities is to ensure that all new hardware is connected and functioning properly. You have several different types of connections that are used for various types of hardware. One of the types of cable available to you is an RJ45 cable.

Which of the following BEST describes where this cable would most likely be used?

- Modem connection
- Fax machine connection
- Telephone connection
- Voice over IP connection

Explanation

RJ45 ports are used to create Ethernet networks by connecting multiple computers and networking devices. RJ45 ports have eight connector pins. Voice over IP (VoIP). RJ11 ports are used by telephones and modems to send analog signals. RJ11 ports have four connector pins.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_RJ45RJ11]

Question 9: Correct

Which of the following protocols carry phone calls over an IP-based network?

- HTTP
- RTSP
- TCP
- VoIP

Explanation

Voice over IP (VoIP) is a method for carrying phone calls over an IP-based network. RTSP is used to stream multimedia content over IP networks. HyperText Transfer Protocol (HTTP) is used by web browsers and web servers to exchange files (such as web pages) through the World Wide Web and intranets. Transmission Control Protocol (TCP) is a protocol which guarantees that data arrives at a destination without errors. VoIP is usually implemented on top of UDP instead of TCP to reduce latency.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_NET_DEVS_VOIP_01]

Question 10: Correct

Which network component connects a device to the transmission media and allows it to send and receive messages?

- Network interface card
- Protocol
- Bridge
- Switch

Explanation

The network interface card (NIC) allows a device to send and receive messages over the transmission media.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_ADA_NIC_NET_DEVICE_01]

Question 11: Correct

Which of the following statements accurately describes how a modem works? (Select TWO.)

- [x] It modulates digital data from the PC into analog data and transmits it on a telephone network.
- [ ] It communicates over a telephone network using digital signals.
- [ ] It demodulates analog PC data into digital data that can be transmitted through a telephone network.
- [ ] It modulates digital data from a telephone network into analog data that a PC can use.
- [ ] It transmits digital signals over ordinary telephone copper wiring at a rate up to 128 Kbps.
- [x] It demodulates analog data from a telephone network into digital PC data.

Explanation

Modem is shorthand for modulator/demodulator. Its job is to convert (or modulate) digital data from a PC into analog telephone signals and transmit them through a telephone network. It also receives analog data from the telephone network and converts (or demodulates) it into digital PC data.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_ADA_NIC_NET_DEVICE_02]

Question 12: Correct

Which of the following is a valid MAC address?

- (•) C0-34-FF-15-01-8E
- ( ) 34-9A-86-1G-B3-24
- ( ) 192.168.12.15
- ( ) 73-99-12-61-15
- ( ) 83-5A-5B-0B-31-55-F1
- ( ) 255.255.255.0

Explanation

A MAC, or hardware address, is a unique identifier hard coded on every network adapter card. A valid MAC address has a total of 12 hexadecimal numbers. Hexadecimal numbers contain the numbers 0 to 9 and the letters A to F. Valid values in a MAC address range anywhere from 00 to FF. Note that one of the answers would be a valid MAC address except it uses a G value, which is beyond the range of a hexadecimal number.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_ADA_NIC_NET_DEVICE_03]

Question 13: Correct

An 8-port switch receives a frame on port number 1. The frame is addressed to an unknown device. What will the switch do?

- ( ) Send the frame out all 8 ports.

- Send the frame out the destination port.
- Send the frame out ports 2-8.
- Drop the frame.

Explanation

Because the switch does not know the port that is used to reach the destination device, it will send the frame out all ports except for the port on which the frame was received. After the switch learns the port that is used to reach the destination device, it will send the frame out only that port.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_ADA_NIC_NET_DEVICE_08]

Question 14: Correct

You have a computer with an onboard LAN adapter. The LAN adapter has failed, and you are unable to connect the computer to the network. What should you do?

- Add a network card using an AGP slot.
- Replace the motherboard.
- Add a network card using a PCI slot.
- Clear the CMOS settings.

Explanation

In this case, you should install a network adapter in a PCI slot. Your computer would then use the new network adapter instead of the one integrated on the motherboard. While installing the new card, you should disable the onboard LAN adapter to prevent it from showing in Device Manager. Replacing the motherboard is too expensive when compared to installing a new expansion card. AGP slots are used for video cards, not network cards. Clearing the CMOS settings erases the configuration information, but does not fix the LAN adapter that is not functioning.

References

TestOut PC Pro - 6.2 Network Hardware
[e_nethdw_pp6.exam.xml Q_ADA_NIC_PCI_NETWORK_ADAPTER]