Exam Report: B.2.2 A+ 220-1001 Core 1 Domain 2: Networking, 20 Random Questions

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Overall Performance

Your Score: 0%

Passing Score: 80%

View results by: ○ Objective Analysis ◉ Individual Responses

Individual Responses

Question 1: Incorrect

Drag the wireless networking technology on the left to its associated transmission distance limitation on the right. Each technology may be used more than once.

Up to 100 meters for Class 1 devices.

[ ] Bluetooth

Up to 30 meters in areas without interference.

[ ] Infrared

Up to 10 meters for Class 2 devices.

[ ] Bluetooth

Explanation

Radio frequency wireless transmissions can reach up to 356 meters, depending upon the 802.11 standard used and interference present in the environment.

Infrared wireless transmissions work best for devices within 1 meter, but can operate up to 30 meters in areas without ambient light interference.

The maximum Bluetooth transmission distance depends on the device class:

- Class 3 devices transmit up to 1 meter.
- Class 2 devices transmit up to 10 meters.
- Class 1 devices transmit up to 100 meters.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC
[e_a_plus_1001_2_20.exam.xml Q_IRBTNFC_BLUETOOTH_07]

Question 2: Incorrect

You have been contacted by OsCorp to recommend a wireless internet solution. The wireless strategy must support a transmission range of 150 feet, use a frequency range of 2.4 GHz, and provide the highest possible transmission speeds. Which of the following wireless solutions would you recommend?

- ○ 802.11b
- ○ 802.11a
- ➡ ○ 802.11n
- ○ 802.11g

Explanation

Of the technologies listed, only the IEEE 802.11n wireless standard addresses the desired requirements. The 802.11a wireless standard offers maximum speeds of 54 Mbps and uses the 5 GHz frequency range. The 802.11g wireless standard offers maximum speeds of 54 Mbps. 802.11b uses the 2.4 GHz frequency range but supports only 11 Mbps transfer speeds.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_a_plus_1001_2_20.exam.xml Q_WIRE_LAN_802]

Question 3: Incorrect

Which of the following statements about the Dynamic Host Configuration Protocol (DHCP) are true? (Select TWO.)

- [ ] It cannot be configured to assign the same IP address to the same host each time it boots.
- [ ] The DHCP server detects workstations when they attach to the network and automatically delivers IP addressing information to them.
- [ ] It can deliver a DNS server address in addition to the host IP address.
- [ ] It can only deliver IP addresses to hosts.
- [ ] A workstation must request addressing information from a DHCP server.

Explanation

DHCP servers deliver IP addresses as well as other host configuration information to network hosts. DHCP can be configured to assign any available address to a host, or it can assign a specific address to a specific host. DHCP clients, typically workstations, must send a request to a DHCP server before it will send IP addressing information to them.

References

TestOut PC Pro - 6.6 IP Configuration
[e_a_plus_1001_2_20.exam.xml Q_IP_CONF_DHCP_01]

Question 4: Incorrect

Which of the following are valid IPv6 addresses? (Select TWO.)

- [ ] 141:0:0:0:15:0:0:1
- [ ] 6384:1319:7700:7631:446A:5511:8940:2552
- [ ] A82:5B67:7700:AH0A:446A:779F:FFE3:0091
- [ ] 343F:1EEE:ACDD:2034:1FF3:5012
- [ ] 165.15.78.53.100.1

Explanation

An IPv6 IP address is a 128-bit address listed as eight 16-bit hexadecimal sections. Leading zeros can be omitted in each section. Therefore, 6384:1319:7700:7631:446A:5511:8940:2552 and 141:0:0:0:15:0:0:1 are both valid IPv6 IP addresses. A single set of all-zero sections can be abbreviated with two colons (::). Therefore, 141::15:0:0:1 would also be a valid way of writing that address.

Digits in a hexadecimal system range from 0-9 and A-F. H is not a valid hexadecimal number. 343F:1EEE:ACDD:2034:1FF3:5012 is too short, having only six sections instead of eight.

References

TestOut PC Pro - 6.7 IP Version 6
[e_a_plus_1001_2_20.exam.xml Q_IPV6ADD_IPV6_01]

Question 5: Incorrect

Which of the following identifies the prefix component of an IPv6 address? (Select TWO.)

- [ ] The last four quartets of an IPv6 address.
- [ ] The last quartet of an IPv6 address.

- [ ] The last 64 bits of an IPv6 address.
- [x] The first 64 bits of an IPv6 address.
- [ ] The first quartet of an IPv6 address.
- [x] The first four quartets of an IPv6 address.

Explanation

An IPv6 address is a 128-bit binary number that uses the first 64 bits as the address prefix and the last 64 bits of the address as the interface ID. The 128-bit binary number is organized into 32 hexadecimal numbers that are organized further into eight quartets. The first four quartets correspond with the first 64 bits of the IPv6 address.

References

TestOut PC Pro - 6.7 IP Version 6
[e_a_plus_1001_2_20.exam.xml Q_IPV6ADD_IPV6_06]

Question 6: Incorrect

A host on your network that provides a service that requires the server to always use the same IP address. Which IP addressing method can you use to manually assign the specific IP address?

- ( ) Link-local addressing
- ( ) APIPA IP addressing
- ( ) Dynamic IP addressing
- ( ) Alternate IP configuration
- (x) Static IP addressing

Explanation

Static IP addressing allows you to manually assign all configuration values. Static addressing is prone to error and should only be used under the following conditions:

- The network has a small number of hosts.
- The network will not change or grow.
- You have some hosts that must always use the same IP address.

References

TestOut PC Pro - 6.6 IP Configuration
[e_a_plus_1001_2_20.exam.xml Q_IP_CONF_STATIC_IP]

Question 7: Incorrect

While investigating a network connectivity issue, a technician finds that the link light on a workstation is not lit, and there is no connectivity after replacing the patch cable with one that is known to be good. The wall jack is not labeled, and within the switch room, none of the cables or patch panel ports are labeled.

Which of the following tools would the technician MOST likely use next?

- ( ) Crimper
- ( ) Punchdown tool
- (x) Tone generator
- ( ) Cable tester

Explanation

A tone generator can be used to identify which port in the patch panel connects to the wall jack. The technician could then investigate further by following the cable from the patch panel to the switch.

A cable tester might be used after the correct cable and patch panel port are identified.

A crimper is used to attach an RJ45 or RJ11 end to a twisted pair cable.
A punchdown tool may be needed later if the identified cable is not attached correctly to either the wall jack or the patch panel. If the cable is not identified, the cable can't be repaired.

References

TestOut PC Pro - 6.10 Network Troubleshooting
[e_a_plus_1001_2_20.exam.xml Q_TRB_NET_04]

Question 8: Incorrect

You suspect that the power supply in your desktop PC is failing. You want to use a multimeter to test the power supply. Which multimeter setting should you use?

- AC volts
- Ohms
- DC volts
- Watts

Explanation

To measure the output of a power supply, measure DC voltage. A power supply converts AC voltage to DC voltage and supplies the DC power to computer components. AC is the voltage input for a power supply. To measure the input, measure the power from the wall socket. An ohm is a measure of resistance used to check the properties of a resistor. Multimeters can measure amps, but do not measure watts.

References

TestOut PC Pro - 2.4 PC Tools
[e_a_plus_1001_2_20.exam.xml Q_TOOL_FCT_MULTIMETER_2]

Question 9: Incorrect

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
- DNS
- ARP
- 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_a_plus_1001_2_20.exam.xml Q_NET_DEVS_DNS]

Question 10: Incorrect

Which of the following correctly describe the most common format for expressing IPv6 addresses? (Select TWO.)

- [ ] Binary numbers
- [ ] 128 numbers, grouped using colons

- [ ] Decimal numbers
- [ ] Hexadecimal numbers
- [ ] 32 numbers, grouped using colons

Explanation

IP version 6 addresses are made up of 32 hexadecimal numbers organized into eight quartets. The quartets are separated by colons. An IPv6 address is a 128-bit number (128 binary digits). IP version 4 addresses use decimal numbers organized into four octets and separated by periods.

References

TestOut PC Pro - 6.7 IP Version 6
[e_a_plus_1001_2_20.exam.xml Q_IPV6ADD_IPV6_03]

Question 11: Incorrect

Which port does Telnet use?

- ( ) 34
- ( ) 25
- ( ) 80
- ( ) 23

Explanation

Telnet uses port 23. However, you should avoid using the Telnet protocol for remote access connections because it opens a plain text, unsecured, remote console connection that is easy for an attacker to monitor or hijack.

Port 25 is used by the SMTP protocol. Port 34 is not used by default by any network protocol. Port 80 is used by the HTTP protocol.

References

TestOut PC Pro - 12.6 Remote Services
[e_a_plus_1001_2_20.exam.xml Q_TRB_RDTOP_01]

Question 12: Incorrect

A salesperson in your organization spends most of her time traveling between customer sites. After a customer visit, she must complete various managerial tasks, such as updating your organization's order database. Because she rarely comes back to your home office, she usually accesses the network from her notebook computer using Wi-Fi access provided by hotels, restaurants, and airports.

Many of these locations provide unencrypted public Wi-Fi access, and you are concerned that sensitive data could be exposed. To remedy this situation, you decide to configure her notebook to use a VPN when accessing the home network over an open wireless connection.

Which of the following key steps should you take when implementing this configuration? (Select TWO. Each option is part of the complete solution.)

- [ ] Configure the browser to send HTTPS requests through the VPN connection.
- [ ] Configure the VPN connection to use MS-CHAPv2.
- [ ] Configure the VPN connection to use IPsec.
- [ ] Configure the VPN connection to use PPTP.
- [ ] Configure the browser to send HTTPS requests directly to the Wi-Fi network without going through the VPN connection.

Explanation

It is generally considered acceptable to use a VPN connection to securely transfer data over an open Wi-Fi network. As long as strong tunneling ciphers and protocols are used, the VPN provides sufficient encryption to secure the connection even though the wireless network itself is not encrypted. It is recommended that you use IPsec or SSL to secure the VPN, as these protocols are relatively secure. You should also configure the browser's HTTPS requests to go through the VPN connection.
To conserve VPN bandwidth and to improve latency, many VPN solutions automatically reroute web browsing traffic through the client's default network connection instead of through the VPN tunnel. This behavior would result in HTTP/HTTPS traffic being transmitted over the unsecure open wireless network instead of through the secure VPN tunnel. Avoid using PPTP with MS-CHAPv2 in a VPN over open wireless configuration, as these protocols are no longer considered secure.

References

TestOut PC Pro - 13.12 VPN
[e_a_plus_1001_2_20.exam.xml Q_VPN_FCT_05]

Question 13: Incorrect

While making an online bank transaction, a customer checks to see that the web browser is displaying a lock icon that indicates that an encrypted TCP/IP suite protocol is being used.

Which of the following TCP/IP port numbers does this protocol typically use when the browser encrypts its communications with the bank's web server?

- 25
- 80
- 143
- 443

Explanation

The TCP/IP suite protocol web browsers use for encrypted communications is HTTPS. HTTPS typically uses port 443.

HTTP uses port 80.

SMTP uses port 25.

The IMAP email protocol uses port 143.

References

TestOut PC Pro - 6.5 IP Networking
[e_a_plus_1001_2_20.exam.xml Q_IP_FACT_PORTS_PROTOCOLS_08]

Question 14: Incorrect

You are the IT technician for your company.

Which of the following mechanisms would BEST allow you to resolve a hostname into its associated IP address? (Select TWO).

- DHCP
- BOOTP
- FTP
- hosts file
- DNS

Explanation

You can use the Domain Name System (DNS) to get the IP address from a given host name. You can also use the local hosts file to map host names into IP addresses. On Windows systems, this file is located in C:\Windows\system32\drivers\etc\. You can use either the DHCP

protocol or the BOOTP protocol to assign IP address and other configuration information to [illegible]ally. Use FTP to transfer files.

References

TestOut PC Pro - 6.6 IP Configuration
[e_a_plus_1001_2_20.exam.xml Q_IP_CONF_NAME_RESOLUTION_01]

Question 15: Incorrect

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

- [ ] 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.
- [ ] It communicates over a telephone network using digital signals.
- [ ] It modulates digital data from the PC into analog data and transmits it on a telephone network.
- [ ] 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_a_plus_1001_2_20.exam.xml Q_ADA_NIC_NET_DEVICE_02]

Question 16: Incorrect

Which of the following wireless networking standards uses a frequency of 5 GHz and supports transmission speeds up to 1.3 Gbps?

- ( ) 802.11b
- ( ) 802.11a
- ( ) 802.11n
- ( ) 802.11g
- ( ) 802.11ac

Explanation

The 802.11ac standard uses the 5 GHz frequency and supports data transmission speeds up to 1.3 Gbps.

802.11n supports data transmission speeds up to 600 Mbps. 802.11g and 802.11a both support data transmission speeds up to 54 Mbps. 802.11b supports data transmission speeds up to 11 Mbps.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_a_plus_1001_2_20.exam.xml Q_WIRE_LAN_802]

Question 17: Incorrect

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

Hub

Switch

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_a_plus_1001_2_20.exam.xml Q_NET_DEVS_NET_DEVICE_04]

Question 18: Incorrect

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 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.

It connects multiple cable segments or devices and broadcasts frames to all of its ports.

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_a_plus_1001_2_20.exam.xml Q_NET_DEVS_NET_DEVICE_05]

Question 19: Incorrect

Which TCP/IP configuration parameter identifies the router that is used to reach hosts on remote networks?

Alternate IP address

WINS server address

DNS server address

Hostname

Subnet mask

Default gateway

Explanation

The default gateway identifies the router to which packets for remote networks are sent. The subnet mask identifies which portion of the IP address is the network address. The WINS server address identifies the WINS server that is used to resolve NetBIOS host names to IP addresses. The DNS server address identifies the DNS server that is used to resolve host names to IP addresses. The alternate IP address identifies IP addressing information to be used in the event the DHCP server can't be reached. The host name identifies the logical name of the local system.

References

TestOut PC Pro - 6.6 IP Configuration
[e_a_plus_1001_2_20.exam.xml Q_IP_CONF_DEFAULT_GATEWAY_01]

Question 20: Incorrect

To assist a user, a help desk technician is able to take advantage of a Windows proprietary network protocol that allows the technician to open a graphical interface to connect with the user's Windows computer.

Which of the following TCP/IP port numbers is the default port used by this protocol?

- 80
- 143
- 443
- 3389

Explanation

The Windows proprietary network protocol that allows the technician to open a graphical interface to connect with the user's Windows computer is Remote Desktop Protocol (RDP). By default, RDP uses port 3389.

HTTP uses port 80.

HTTPS uses port 443.

IMAP email clients use port 143.

References

TestOut PC Pro - 6.5 IP Networking
[e_a_plus_1001_2_20.exam.xml Q_IP_FACT_PORTS_PROTOCOLS_06]