Exam Report: 7.1.11 Practice Questions

Date: 4/2/25 5:39:46 pm
Time Spent: 8:26

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Overall Performance

Your Score: 25%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Incorrect

Which wireless standard can stream data at a rate of up to 54 Mbps using a frequency of 5 GHz?

- ~~802.11b~~
- 802.11n
- 802.11a
- 802.11g

Explanation

802.11a can stream data at a rate of up to 54 Mbps using a frequency of 5 GHz. 802.11b can stream data at a rate of up to 11 Mbps using a frequency of 2.4 GHz. 802.11g can stream data at a rate of up to 54 Mbps using a frequency of 2.4 GHz. 802.11n can stream data at a rate of up to 600 Mbps using a frequency of 2.4 GHz or 5 GHz.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_802]

Question 2: Incorrect

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

- 802.11a
- 802.11b
- 802.11ac
- ~~802.11n~~
- 802.11g

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_wireless_pp6.exam.xml Q_WIRE_LAN_802]

Question 3: Correct

The 802.11ac wireless networking standard provides increased bandwidth and communication speeds by using which of the following technologies? (Select TWO).

- [ ] OFDM modulation to allow several parallel data channels to stream data.
- [x] MU-MIMO to allow multiple users to use the same channel.
- [ ] Peer-to-peer mode to allow each host to communicate directly with other hosts.
- [ ] Dual band transmission to allow data to be transmitted at two frequencies at the same time.
- [x] Channel bonding to combine more channels in the 5 GHz band to allow for up to 160-MHz-wide channels.

Explanation

The 802.11ac wireless network standard increases bandwidth and communication speeds using the following technologies:

- MU-MIMO is an enhancement to MIMO that allows multiple users to use the same channel. In addition to adding MU-MIMO, 802.11ac doubled the number of MIMO radio streams from four to eight.
- Channel bonding is used to combine even more channels in the 5-GHz band, allowing up to 160-MHz wide channels. (Even though 160-MHz-wide channels are supported, most 802.11ac networks use 80-MHz-wide channels.)

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_802]

Question 4: Correct

Which IEEE wireless standards specify transmission speeds up to 54 Mbps? (Select TWO.)

- [ ] 802.11b
- [ ] Bluetooth
- [x] 802.11g
- [x] 802.11a
- [ ] 802.1x

Explanation

Both the 802.11a and the 802.11g wireless standards specify maximum transmission speeds up to 54 Mbps. Bluetooth is a wireless standard commonly used to connect peripheral devices and operates at 720 Kbps. The 802.11b wireless standard provides transmission speeds of 11 Mbps. 802.1x is a wireless security standard that provides an authentication framework for 802-based networks.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_802]

Question 5: Incorrect

Which data transmission rate is defined by the IEEE 802.11b wireless standard?

- ( ) 10 Mbps
- (•) ~~54 Mbps~~
- ( ) 150 Mbps

- 11 Mbps
- 2 Mbps

Explanation

The IEEE 802.11b standard defines wireless transmission rates up to 11 Mbps. 802.11b wireless network interface cards and wireless access points (also called wireless hubs or wireless routers) will automatically negotiate the best transmission speed up to 11 Mbps based on current network traffic load and the quality of the wireless connection between the client and access point. The wireless communications are affected by distance, dense physical obstructions, and other electromagnetic interference producing devices. IEEE 802.11a and 802.11g defines wireless transmission rates up to 54 Mbps. The IEEE 802.3 standard defines Ethernet 10baseT cable based transmissions of 10 Mbps. IEEE 802.11n defines wireless transmission rates of 150 and 300 Mbps.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_802]

Question 6: Incorrect

Which of the following are characteristics of the 802.11g wireless standard? (Select THREE.)

- [ ] Backwards compatible with 802.11a devices
- [x] Maximum bandwidth of 54 Mbps
- [x] Backwards compatible with 802.11b devices
- [ ] Maximum bandwidth of 11 Mbps
- [x] ~~Operates in the 5.75 GHz range~~
- [x] Operates in the 2.4 GHz range

Explanation

802.11g wireless networks:

- Operate in the 2.4 GHz range
- Have a maximum bandwidth of 54 Mbps
- Are backwards compatible with 802.11b networks

802.11b provides 11 Mbps bandwidth. 802.11a operates in the 5.75 GHz range. For this reason, 802.11a is not compatible with 802.11b or 802.11g.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_802]

Question 7: Correct

You are designing a wireless network for a client. Your client needs the network to support a data rate of at least 150 Mbps. In addition, the client already has a wireless telephone system installed that operates 2.4 GHz. Which 802.11 standard will work best in this situation?

- 802.11g
- 802.11a
- 802.11b
- 802.11n

Explanation

802.11n is the best choice for this client. 802.11b and 802.11g both operate in the 2.4 GHz to 2.4835 GHz range, which would cause interference with the client's wireless phone system. 802.11a operates in the 5.725 GHz to 5.850 GHz frequency range, which doesn't interfere with the phone system. However, its maximum speed is limited to 54 Mbps.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_802]

Question 8: 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?

- 802.11a
- 802.11b
- 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_wireless_pp6.exam.xml Q_WIRE_LAN_802]

Question 9: Incorrect

Which type of configuration would you use if you wanted to deploy 802.11n technology to communicate directly between two computers using a wireless connection?

- WAP
- Ad hoc
- ~~WEP~~
- Infrastructure

Explanation

Configure an ad hoc connection to connect one computer directly to another using a wireless connection. An infrastructure configuration uses a Wireless Access Point (WAP) to create a network. Devices communicate with each other through the WAP. WEP is a security mechanism used for authentication.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_AD_HOC_WIRELESS]

Question 10: Incorrect

One of your customers wants to configure a small network in his home. The home has three floors, and there are computers on each floor. This customer needs to share files between computers, print to a centrally located printer, and have access to the internet.

Which of the following print solutions would BEST meet this client's needs?

- Configure a Wi-Fi global area network.
-

Configure a Wi-Fi infrastructure network.

Configure a Wi-Fi space network.

~~Configure a Wi-Fi ad hoc network.~~

Explanation

In infrastructure mode, each wireless host connects to a central connecting device called a wireless access point (AP). In this configuration, hosts communicate with each other through the AP instead of communicating with each other directly. The AP behaves much in the same way as a wired switch in this mode. The wireless AP not only controls communication between devices, but is also able to bridge the wireless network with a wired network and the internet.

In an ad hoc configuration, devices can't use the internet unless one of them is connected to the internet and sharing it with the others. If internet sharing is enabled, the client performing this function will experience massive performance issues, especially if there are lots of interconnected devices. Since a device connected to the internet is required for ad hoc, it would be best to use infrastructure to alleviate some of the limitations of ad hoc. A space network is used for communication between spacecraft, usually in the vicinity of the Earth, such as NASA's Space Network. A global network is a network used to support mobile across an arbitrary number of wireless LANs, satellite coverage areas, or other configurations.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_INFRASTRUCTURE]

Question 11: Incorrect

A customer is experiencing a sporadic interruption of their Wi-Fi network in one area of their building. A technician investigates and discovers signal interference caused by a microwave oven. The customer approves replacing the wireless access point that covers the area, but asks that the wireless speed also be increased.

Which of the following Wi-Fi standards should the replacement device support to BEST fulfill the customer's needs?

802.11ac

~~802.11a~~

802.11g

802.11b

Explanation

The microwave oven interferes with wireless signals operating at 2.4 GHz. The 802.11ac standard is the best choice. It operates at 5.0 GHz and has a maximum throughput of 1300 Mbps.

Both the 802.11b and 802.1g standards operate at 2.4 GHz.

The 802.11a standard operates at 5.0 GHz, but has a maximum throughput of 54 Mbps.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WIRE_LAN_WIFI_STANDARDS_01]

Question 12: Incorrect

While configuring a wireless access point device, a technician is presented with several security mode options.

Which of the following options will provide the most secure access?

WPA and TKIP

~~WPA2 and TKIP~~

- WEP 128
- WPA2 and AES
- WPA and AES

Explanation

Of the three wireless security protocols (WEP, WPA and WPA2), WPA2 is the most secure.
Of the two encryption algorithms (TKIP and AES), AES is the most secure.

References

TestOut PC Pro - 7.1 802.11 Wireless
[e_wireless_pp6.exam.xml Q_WL_SEC2_WIFI_STANDARDS_02]