

Exam Report: 7.2.4 Practice Questions

Date: 4/2/25 5:51:21 pm

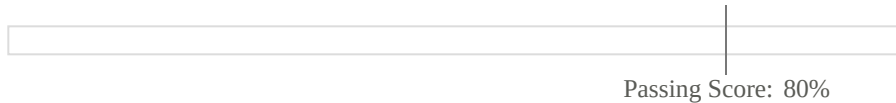
Time Spent: 41:23

Candidate: Garsteck, Matthew

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Overall Performance

Your Score: 64%

View results by: ☐ Objective Analysis ☒ Individual Responses

Individual Responses

▼ Question 1: Correct

A user pays for a retail purchase by placing a smart phone next to the merchant's reader. Which of the following mobile device connections is being used?

- ☐ Lightning
- ☐ MicroUSB
- ☐ Bluetooth

➡ ☒ NFC

Explanation

Near-field communication (NFC) enables two electronic devices, one of which is typically a mobile device such as a smartphone, to establish communication by bringing them within 10 cm (3.9 in) of each other. A popular NFC application is mobile proximity payments.

A microUSB connection is used to connect two devices using a physical cable.

A wireless Bluetooth connection has a range of approximately 10 m (32 ft), making it unsuitable for retail transactions.

A lightning connection is used to connect an Apple mobile device to another device using a physical cable or by plugging the second device directly into the lightning connection. A credit card reader can be plugged into a lightning connection to make retail payments, but is not required in this scenario.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC

[e_bluetooth_pp6.exam.xml Q_IRBTNFC_ACCESSORIES_PORTS_01]

▼ Question 2: Correct

You want to use a wireless keyboard and mouse with your laptop computer. Which method should you choose?

- ☐ IEEE 1394
- ☐ PS/2
- ➡ ☒ Bluetooth
- ☐ 802.11g wireless
- ☐ USB

Explanation

Bluetooth would be the best choice because it has a high transfer rate and because it automatically detects other Bluetooth devices in the area and creates an encrypted PAN between them. 802.11g is a wireless networking standard for communicating between computers, not for connecting wireless devices to a computer. PS/2, IEEE 1394 (Firewire), and USB are all wired connection standards.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC

[e_bluetooth_pp6.exam.xml Q_IRBTNFC_BLUETOOTH_01]

▼ Question 3: Incorrect

What is the maximum range of the Bluetooth 2.0 specification for Class 1 devices?

- ☐ 50 M
- ☐ 30 M
- ☐ 300 M
- ☒ 10 M

➡ ☐ 100 M

Explanation

Bluetooth version 2.0 class 1 devices have a maximum range of about 100 meters. Earlier versions had a maximum range of only about 10 meters.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC

[e_bluetooth_pp6.exam.xml Q_IRBTNFC_BLUETOOTH_02]

▼ Question 4: Correct

Which of the following are characteristics of Bluetooth? (Select TWO.)

➡ ☒ Ad hoc connections

☐ 5.75 GHz radio wireless

☐ Red spectrum light waves

➡ ☒ 2.4 GHz radio wireless

☐ Line-of-sight transmission

Explanation

Bluetooth is a wireless networking standard that uses 2.4 GHz radio waves. These are the same type of radio waves used with 802.11 wireless networking, so radio transmission can go through walls (not limited to line-of-sight connections). Bluetooth uses ad hoc connections between devices. Infrared uses red spectrum light waves and is limited to line-of-sight transmissions.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC

[e_bluetooth_pp6.exam.xml Q_IRBTNFC_BLUETOOTH_03]

▼ Question 5: Correct

Which of the following is the maximum transmission speed for Bluetooth v3 and v4 devices?

☐ 1 Mbps

➡ ☒ 24 Mbps

☐ 3 Mbps

☐ 11 Mbps

Explanation

Bluetooth v3 and v4 devices have a maximum transmission speed of 24 Mbps.

Bluetooth v1.2 devices have a maximum transmission speed of 1 Mbps. Bluetooth v2 devices have a maximum transmission speed of 3 Mbps. The wireless standard 802.11b transmits data at a rate of up to 11 Mbps.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC

[e_bluetooth_pp6.exam.xml Q_IRBTNFC_BLUETOOTH_04]

▼ Question 6: Incorrect

You need a type of wireless connection that can transfer data between your phone, PDA, and laptop. You are transferring sensitive information.

Which of the following would be the BEST choice?

☒ Cellular WAN

➡ ☐ Bluetooth

☐ Wireless Ethernet

☐ Infrared

Explanation

A Bluetooth connection would be the best choice because it automatically detects Bluetooth-enabled devices and creates a wireless PAN between them. It can be used for both voice and data signals, and it also provides 128-bit encryption to protect sensitive information in transit. Infrared is a line-of-sight medium, so it may be difficult to maintain connectivity. It doesn't provide encryption. Cellular WAN provides very little security for information in transit and requires a cellular connection for each device. Wireless Ethernet is used to transfer data, not to connect devices.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC

[e_bluetooth_pp6.exam.xml Q_IRBTNFC_BLUETOOTH_05]

▼ Question 7: Correct

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 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_bluetooth_pp6.exam.xml Q_IRBTNFC_BLUETOOTH_07]

▼ Question 8:

Incorrect

A portable computer connected to a printer with an infrared interface works fine inside your office. However, when you go outside, it works sporadically.

Which of the following would BEST resolve this issue? (Select TWO).

- ☐ Install Ferrite shielding on both the PC and printer power cords.
- ➔ ☐ Move the printer closer to the computer.
- ➔ ☒ Block direct and reflected sunlight from the pathway between the PC and the printer.
- ☐ Install a Gamma Ray Spectrometer (GRS) to shield the interface.
- ☐ Set the environment setting to outdoor mode in the BIOS.

Explanation

Infrared light is light that is near visible light in the electromagnetic spectrum. Therefore, very bright lights and, in particular, sunlight may cause interference with infrared interfaces. The best way to manage this interference is to minimize the distance between the connected devices and minimize interfering sunlight. There is no outdoor mode in BIOS settings. A GRS measures gamma radiation, not infrared. Adding ferrite shielding to power cords does nothing to reduce infrared interference.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC

[e_bluetooth_pp6.exam.xml Q_IRBTNFC_INFRARED_01]

▼ Question 9:

Correct

A user has purchased an external speaker to play music from a mobile device over a wireless connection.

Which of the following actions is MOST likely needed for speaker connectivity.

- ➔ ☒ Enable pairing
- ☐ Configure tethering
- ☐ Disable airplane mode
- ☐ Create hotspot

Explanation

Wireless external speakers most often use Bluetooth. A mobile device and an external speaker must be paired when Bluetooth communication is used.

Tethering describes the ability to use a cellular connection on a mobile phone to provide internet connectivity to another mobile device. This is usually done through a physical cable.

A hotspot is created on a mobile phone to supply internet connectivity to multiple devices through the phone's cellular connection.

Airplane mode will disable all external communication methods on a mobile device to conform to airline requirements.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC

[e_bluetooth_pp6.exam.xml Q_IRBTNFC_MOBILE_NETWORK_01]

▼ Question 10: Correct

Which of the following wireless communication technologies can be described as follows?

- Has a very limited transmission range of less than two inches
- Used with credit cards and passports
- Slower than other wireless technologies
- Constantly emits a signal

➡ ☒ NFC

☐ IEEE 1394

☐ Infrared in line-of-sight mode

☐ Infrared in diffuse mode

☐ Bluetooth

Explanation

Near-field communication, or NFC, uses the 13.56 MHz frequency and has a very short range. In order for devices to communicate, they have to be within two inches of each other. NFC chips are being used for applications such as passports and credit cards to contain all the information about the passport holder or the credit card account. NFC chips use encryption algorithms to secure the connection, but constantly emit a signal and use a much slower transmission speed than other wireless technologies.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC
[e_bluetooth_pp6.exam.xml Q_IRBTNFC_NFC]

▼ Question 11: Incorrect

Which of the following is not an example of wireless networking communications?

☐ Infrared

➡ ☐ DSL

☐ 802.11n

☒ Bluetooth

Explanation

DSL, or Digital Subscriber Line, is not a form of wireless networking communications. Rather, it is a form of high-speed WAN connection used to connect remote systems to the internet. Wireless communications are types of networking technologies that do not rely upon wires or cables to connect computers together in a networking relationship. 802.11n is the primary wireless standard used. 802.11-compliant networks employ communication signals of 2.4GHz or 5.7 GHz radio waves. Infrared and Bluetooth are other forms of wireless networking communications.

References

TestOut PC Pro - 7.2 Infrared, Bluetooth, and NFC
[e_bluetooth_pp6.exam.xml Q_IRBTNFC_WIRELESS_08]