Exam Report: 6.3.6 Practice Questions

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Overall Performance

Your Score: 53%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Correct

A technician is replacing a cable modem. The cable from the cable company has an inner solid wire conductor and an outer mesh conductor separated by PVC plastic insulation.

Which of the following network cable types is being used?

- Fiber optic cable
- Coaxial cable
- Straight-through cable
- Twisted pair cable

Explanation

Coaxial cabling has an inner conductor that is a solid wire made of copper or copper-coated tin. The outer mesh conductor, or shield, is made of aluminum or tin-coated copper. A PVC plastic insulator surrounds the inner conductor and insulates the signal from the mesh conductor.

Twisted pair cabling consists of pairs of insulated copper conductors that are twisted together to minimize crosstalk.

Fiber optic cabling carries light signals through a glass or plastic core surrounded by cladding and sheathing.

A straight-through cable is a twisted pair patch cable.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_COAX_FCT_CABLE_CONNECTOR]

Question 2: Correct

Which of the following are characteristics of coaxial network cable? (Select TWO.)

- It is totally immune to electromagnetic interference (EMI).
- It is made of plastic or glass in the center of the cable.
- It has a conductor made from copper in the center of the cable.
- It uses two concentric metallic conductors.
- The conductors within the cable are twisted around each other to eliminate crosstalk.

Explanation

Coaxial cable is composed of a central copper conductor surrounded by an insulator, which is then

surrounded by a second metallic mesh conductor. The name coaxial is derived from the fact that both of these conductors share a common axis.

Twisted-pair cables are twisted around each other to reduce the effects of Electromagnetic Interference (EMI) and crosstalk. Fiber optic cables have a plastic or glass center, known as the core. Only fiber optic cables are totally immune to electromagnetic interference (EMI) because light pulses, instead of electrical signals, represent the data.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_COAX_FCT_COAXIAL_CABLING]

Question 3: Incorrect

A technician is installing a cable modem that supplies internet connectivity for a home office.
Which of the following cabling types would be used to connect the cable modem to the cable wall outlet?

- ~~CAT 5e~~
- CAT 6a
- RG6
- Multimode fiber

Explanation

Cable modems are connected to a cable wall outlet using coaxial cabling. RG6 is the most common coaxial cable used for this connection.

CAT 5e, CAT 6a, and multimode fiber cables can't be used to connect cable modems to a cable wall outlet.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_COAX_FCT_COMPARE_CABLING]

Question 4: Incorrect

A technician is running a network above a dropped ceiling that is also used for ventilation. The cable must be twisted pair and must be capable of Gigabit Ethernet speeds.

Which of the following cables should be used?

- Plenum-rated multimode fiber
- ~~Riser-rated CAT 5e~~
- Plenum-rated CAT-6a
- Riser-rated RG-58

Explanation

Plenum-rated CAT-6a cables can transfer data at 10 Gbps and can be placed in plenum spaces used for ventilation.

Riser-rated RG-58 cables are coaxial and can transfer data at 10 Mbps. Plenum-rated cables can be used in riser applications, but riser-rated cables can't be used in plenum applications.

Riser-rated CAT-5e cables can transfer data at 1 Gbps, but can't be used in plenum applications.

Plenum-rated multimode fiber can transfer data at 10 Gbps, but is not twisted pair.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_TWST_COMPARE_CABLING_03]

Question 5: Correct

You are installing networking cable in the air space between the ceiling and the roof of a building. Which type of cabling should you use?

- Plenum
- PVC
- Multi-mode fiber
- STP

Explanation

Plenum cable is fire resistant and non-toxic, making it optimal for wiring above ceiling tiles. PVC cable cannot be used to wire above ceilings because it is toxic when burned. Both STP and fiber optic cables can be rated for plenum areas, but are not fire resistant.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_TWST_PLENUM]

Question 6: Correct

Which kind of connector do you use to connect a modem to a standard telephone line?

- RG58
- F-type
- RJ11
- RJ45

Explanation

A standard telephone line connector is an RJ11. RJ45 jacks are used for Ethernet twisted pair cables. Video cards and monitors with a built-in TV tuner have an F-type video connector. RG58 is used for 10Base2 Ethernet networking (also called Thinnet).

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_TWST_RJ-11]

Question 7: Correct

Which connector is used with unshielded twisted pair (UTP) cable?

- RJ45
- BNC
- AUI
- DIX

Explanation

An RJ45 connector is used with unshielded twisted pair (UTP) cable.

BNC and AUI are used with coaxial cables. DIX is an Ethernet protocol.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_TWST_RJ-45]

Question 8: Incorrect

You have recently been called to troubleshoot network connectivity problems at a user's workstation. You have found that the network cable runs across high-traffic areas on the floor, causing the cable to wear through and break. You have replaced the cable with a plenum-rated and shielded twisted pair cable. You would like to minimize the problem and prevent it from happening again.

Which of the following will BEST protect the cable from further damage?

- Run the cable under the carpet.
- Encase the cable in a protective shield and secure the cable to prevent it from slipping.
- Run the cable through the ceiling area instead of across the floor.
- ~~Periodically check the cable for kinks and wear. Replace the cable when necessary.~~

Explanation

Because the cable is a plenum-rated cable, you can run the cable through the ceiling area. This is the best method of preventing wear to the cables. The cable shielding will also protect the cable from some electromagnetic interference. However, you should be sure to avoid running the cable directly across light fixtures.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_TWST_STP_CABLING]

Question 9: Correct

What is a major benefit STP provides that UTP does not?

- Safer for installations in overhead ceiling spaces
- Lower cost
- Ability to install longer cable lengths
- Greater resistance to interference

Explanation

Shielded Twisted Pair (STP) has a grounded outer copper shield around the bundle of twisted pairs or around each pair. This provides added protection against EMI. Unshielded Twisted Pair (UTP) does not have a grounded outer copper shield.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_TWST_STP_VS_UTP]

Question 10: Incorrect

A technician connects two network switches using a twisted pair cable. Neither switch supports auto-uplinking.

Which of the following identifies the TIA wiring standard required on each end of the cable?

- ~~Both ends must only be T568A.~~
- Both ends must only be T568B.
- One end must be T568A, and the other must be T568B.

Explanation

A crossover cable connects two switches that don't support auto-uplinking. A crossover cable is constructed using the T568A wiring standard on one end and the T568B standard on the other end.

If both ends are T568A, the cable is a straight-through cable.

If both ends are T568B, the cable is a straight-through cable.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CABLE_CONNECTOR_02]

Question 11: Correct

While sorting through a box of cables in your storage room, you find one that matches the configuration shown in the image.

Which of the following BEST describes the type of cable configuration and the purpose for which it would be used?

- Patch (or straight-though) cable configuration used to connect computers to network devices, such as switches and hubs.
- Crossover cable configuration used to connect computers directly to one another for networking.
- RJ11 configuration used to connect wireless routers to phone line connections.
- Rollover cable configuration used to connect computers to routers for console management.

Explanation

This is a crossover cable configuration. Using this configuration, computers can connect directly to one another. The easiest way to create a crossover cable is to arrange the wires in the first connector using the T568A standard and arrange the wires in the second connector using the T568B standard.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CABLE_NET_MEDIA_01-PB]

Question 12: Incorrect

You are using a crimper to attach an RJ45 connector to a Cat 6 UTP cable. You need to use the T568A standard to connect the individual wires to the connector. Which wire should be connected to pin 1?

- Green with white
- Blue
- ~~Orange with white~~
- Green

Explanation

According to the T568A standard, the green with white wire should be connected to pin 1 in the RJ45 connector.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CABLE_T568A_STANDARD]

Question 13: Incorrect

A technician must press a cable connector's retaining tab to remove a faulty fiber optic network cable.

Which of the following connectors does the cable use?

- ST
- RJ11
- ~~RJ45~~
- LC

Explanation

The LC connector is used with fiber optic cabling. It has a retaining tab that locks the connector in place.

The ST connector is used with fiber optic cabling. It is locked in place using a push and twist action.

The RJ11 connector is used with twisted pair cabling. It supports up to two pairs of wires. It has a retaining tab that locks the connector in place.

The RJ45 connector is used with twisted pair cabling. It supports up to four pairs of wires. It has a retaining tab that locks the connector in place.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_FBR_CONNECTOR_01]

Question 14: Correct

Which of the following are advantages of using fiber optic cabling for a network, as opposed to other types of cabling? (Select TWO.)

- [ ] Lower installation cost
- [ ] Faster installation
- [x] Immunity to electromagnetic interference
- [ ] Increased flexibility
- [x] Greater cable distances without a repeater

Explanation

Compared to other types of cabling, fiber optic cabling allows greater cable distances without a repeater and is immune to electromagnetic interference.

However, installation costs more and takes longer. In addition, fiber optic cabling is much less flexible than other cabling.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_FBR_FIBER_OPTIC_01]

Question 15: Incorrect

Match the fiber optic cable types on the left with the appropriate characteristics on the right. Each cable type may be used once, more than once, or not at all.

Data transfers through the core using more than one light rays.

Multimode

The core diameter is around 10 microns.

~~Dual mode~~ Single mode

Cable lengths can extend a great distance.

✓ Single mode

Cable lengths are limited in distance.

✓ Multimode

Explanation

Single mode fiber optic cable has the following characteristics:

- Data transfers through the core using a single light ray (the ray is also called a mode)
- The core diameter is around 10 microns
- Cable lengths can extend a great distance

Multimode fiber optic cable has the following characteristics:

- Data transfers through the core using multiple light rays
- The core diameter is around 50 to 100 microns
- Cable lengths are limited in distance

Fiber optic cable does not have a "dual mode" type.

References

TestOut PC Pro - 6.3 Networking Media
[e_netmedia_pp6.exam.xml Q_CBL_FBR_NET_MEDIA_02]