3.1.6 Practice Questions

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Score: 0%

Passing Score: 80%

Question 1. ✕ Incorrect

A technician is installing a cable modem that supplies internet connectivity for a home office.

Which of the following cabling types would they use to connect the cable modem to the wall outlet?

- Cat 5e
- Multi-mode fiber
- Cat 6a
- → RG-6

Explanation

Cable modems are connected to a wall outlet using coaxial cabling. RG-6 is the most common coaxial cable used for this connection.

Cat 5e, Cat 6a, and multi-mode fiber cables cannot be used to connect cable modems to a wall outlet.

References

3.1.1 Network Cables
3.1.2 Coaxial Cable Facts
q_coax_compare_cabling_pp7.question.fex

Question 2. ✕ Incorrect

You need to connect the satellite television signal to your HD 4K flat screen TV using a coaxial cable.

Which of the following is the BEST type of coaxial cable to use?

- F-type
- BNC
- RG-59
- → RG-6

Explanation

RG-6 cables have much lower signal loss over long distances than RG-59, resulting in a higher quality signal. RG-6 cables are used for cable television, satellite television, and cable modems.

RG-59 coaxial cables are not used much anymore because they lose signal quality over long distances. Instead, almost all industries are using RG-6.

BNC and F-type are types of connectors for coaxial cabling. They are not types of coaxial cables.

References

3.1.1 Network Cables
3.1.2 Coaxial Cable Facts
q_coax_rg_6_cabling_pp7.question.fex

Question 3. ✕ Incorrect

Which of the following situations is MOST likely to justify an investment in a Cat 6a cable instead of a Cat 6 cable?

- Users will be doing a lot of high-resolution printing.
- Users will be streaming a lot of video.
- The cable needs to be run though a raised floor.
- → The work area has a lot of electromagnetic interference (EMI).

Explanation

A Cat 6a (advanced) cable is designed to be less susceptible to electromagnetic interference (EMI) than Cat 6. Network performance can be greatly diminished by higher-than-average EMI.

When cabling is run under the floor, the cabling must be plenum-insulated so as to be fire resistant and non-toxic, but it does not need to be Cat 6.

Streaming video or doing high-resolution printing does not justify the extra cost of a Cat 6a cable when Cat 6 can handle the same bandwidth.

References

3.1.1 Network Cables
3.1.3 Twisted Pair Cable Facts
q_cbl_twst_cat_6a_for_emi_pp7.question.fex

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 the technician use?

- ○ Plenum-rated multimode fiber
- ○ Riser-rated RG-58
- → ○ Plenum-rated Cat 6a
- ○ Riser-rated Cat 5e

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 cannot be used in plenum applications.

Riser-rated Cat 5e cables can transfer data at 1 Gbps, but they cannot be used in plenum applications.

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

References

3.1.1 Network Cables
3.1.3 Twisted Pair Cable Facts
q_cbl_twst_compare_cabling_pp7.question.fex

Question 5. ✕ Incorrect

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

- Safer for installations in overhead ceiling spaces
- Ability to install longer cable lengths
- Lower cost
- → 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.

STP costs considerably more than UTP. Neither is safer for installations in overhead ceiling spaces unless they are made with plenum plastic shielding.

STP and UTP are equally effective at transmitting a signal over the same distance.

References


3.1.1 Network Cables

3.1.3 Twisted Pair Cable Facts

3.1.4 Twisted Pair Connector Facts

q_cbl_twst_stp_vs_utp_pp7.question.fex

Question 6. ✕ Incorrect

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?

→ ○ Crossover cable configuration used to connect computers directly to one another for networking.

○ Patch (or straight-though) cable configuration used to connect computers to network devices, such as switches and hubs.

○ RJ-11 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.

The illustrated cable is not a patch (straight-through), RJ-11, or rollover cable.

References

3.1.1 Network Cables

3.1.3 Twisted Pair Cable Facts

3.1.4 Twisted Pair Connector Facts

q_cable_net_media_pp7.question.fex

Question 7. ✕ Incorrect

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?

- RJ-11 configuration used to connect wireless routers to phone line connections.
- Crossover cable configuration used to connect computers directly to one another for networking.
- Rollover cable configuration used to connect computers to routers for console management.
- → Patch (or straight-though) cable configuration used to connect computers to network devices, such as switches and hubs.

Explanation

This is a patch (or straight-through) cable configuration. Using this configuration, computers can connect to the network through a hub or switch with a patch cable. Patch cables use the same wire configuration on each connector end.

The illustrated cable is not a crossover, RJ-11, or rollover cable.

References

3.1.1 Network Cables
3.1.3 Twisted Pair Cable Facts

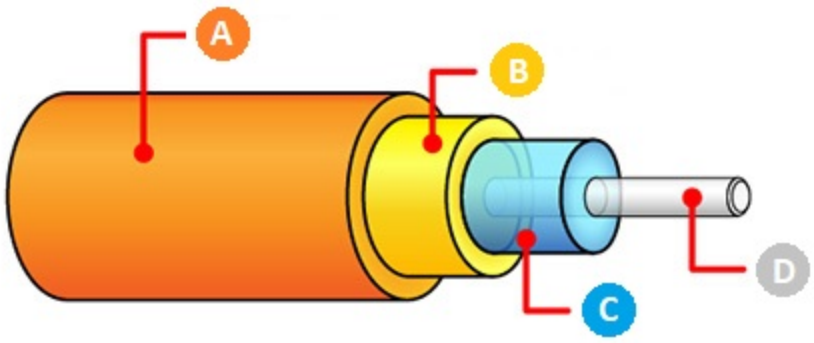
3.1.4 Twisted Pair Connector Facts

q_cable_patch_cable_config_pp7.question.fex

Question 8. ✕ Incorrect

A fiber optic cable consists of four basic components.

Using the illustration below, match each illustration label on the left with the correct component name on the right.



Central core	Protective layer	Cladding	Plastic sheath
[ ] D	[ ] B	[ ] C	[ ] A

Keyboard Instructions

Explanation

Below are the correct cable component names.

- A - Plastic sheath (encases everything and protects the cable).
- B - Protective layer (provides a stiff structure to prevent the cladding and central core from breaking).
- C - Cladding (maintains the signal in the center of the core as the cable bends).
- D - Central core (carries the signal and is made of plastic or glass).

References

3.1.1 Network Cables
3.1.5 Fiber Optic Cable Facts

q_cbl_fbr_components_pp7.question.fex

Question 9. ✕ Incorrect

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

- [ ] Increased flexibility
- [x] Immunity to EMI
- [ ] Lower installation cost
- [ ] Faster installation
- [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 EMI (electromagnetic interference). On the other hand, installation costs more and takes longer. In addition, fiber optic cabling is much less flexible than other cabling.

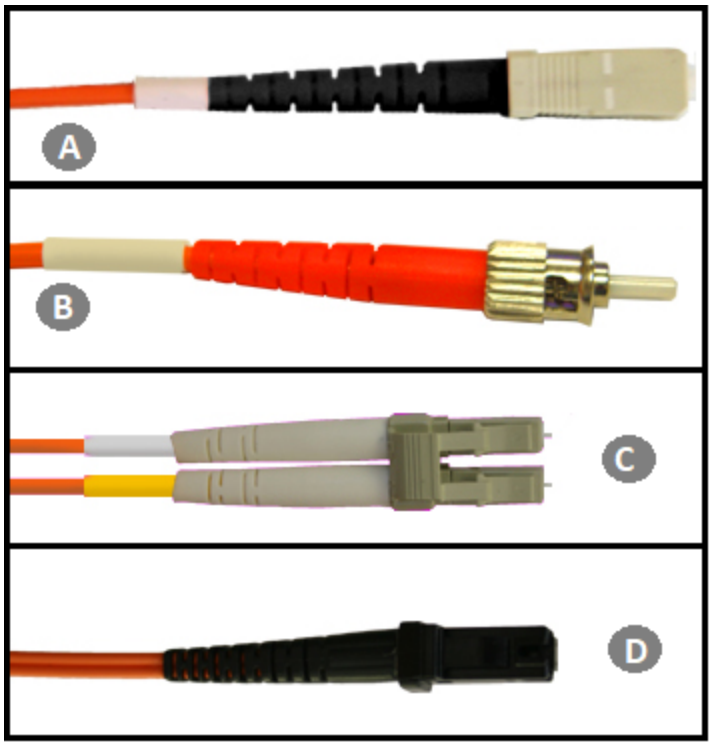
References

3.1.1 Network Cables
3.1.5 Fiber Optic Cable Facts
q_cbl_fbr_fiber_optic_advtg_pp7.question.fex

Question 10. ✕ Incorrect

The illustration below lists four different cable types.

Using the illustration, match each illustration label on the left with the correct cable type on the right.



MT-RJ connector	ST connector	LC connector	SC connector
D	B	C	A

Keyboard Instructions

Explanation

Below are the correct cable types:

- A - SC connector
- B - ST connector
- C - LC connector
- D - MT-RJ connector

References

3.1.1 Network Cables

3.1.5 Fiber Optic Cable Facts

q_cbl_fbr_select_connector_type_pp7.question.fex