Section Quiz

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Score: 70%   Passing Score: 80%

▼ **Question 1:**   ✓ Correct

It is important to follow correct procedures when running electrical cables next to data cables in order to protect against which environmental concern?

- ○ Temperature
- ○ Humidity
- ○ Airflow
- ➡ ◉ Electromagnetic interference

EXPLANATION

Electromagnetic interference is when electrical devices or cabling puts out electromagnetic pulses that can cause issues with data cabling and other unshielded devices.

Temperature, humidity, and airflow are all important parts of environmental control, but they do not interfere with data cabling.

Question 2:   ✔ Correct

Most equipment is cooled by bringing cold air in the front and ducting the heat out of the back. What is the term for where the heat is sent in this type of scenario?

○ Front aisle

○ Cold aisle

➡ ● Hot aisle

○ Back aisle

EXPLANATION

The hot aisle is where all of the heat is sent from the servers and network equipment to be transmitted to the HVAC return vent.

The cold aisle is where the chilled air is sent so that the equipment can duct it through to cool the devices.

Neither front nor back aisle is the correct term used in environmental controls.

Question 3:   ✗ Incorrect

What is the recommended humidity level for server rooms?

○ 10% or lower

● ~~30%~~

➡ ○ 50%

○ 70% or higher

EXPLANATION

Keep humidity between 40% and 60% to prevent electrostatic discharge, which causes electrical charges that can damage computer components.

Question 4:   ✓ Correct

Which deviation in power is the longest in duration?

- ○ Sag
- ○ Surge
- ➡ ◉ Blackout
- ○ Transient

EXPLANATION

A blackout is generally a longer outage of power. The rest of the events are relatively short durations of less than a few seconds.

Question 5:   ✓ Correct

Power, heating, ventilation, air conditioning systems (HVAC), and utilities are all components of which term?

- ➡ ◉ Infrastructure
- ○ Hot aisle
- ○ Cold aisle
- ○ Network protection

EXPLANATION

These components are all part of the infrastructure that supports network and server operations.

The cold and hot aisles are part of the HVAC system, but do not make up the infrastructure themselves.

Network protection is not part of the infrastructure.

▼ **Question 6:**   ✓ Correct

You maintain a network for an industrial manufacturing company. You are concerned about the dust in the area getting into server components and affecting network availability.

Which of the following should you implement?

○ UPS

○ Line conditioner

○ Backup generator

○ Negative pressure system

➡ ◉ Positive pressure system

EXPLANATION

Use positive pressure systems. Positive pressure systems protect the air quality in the facility by causing air to be forced out through doors, windows, and other openings.

Negative pressure systems draw air in, potentially bringing in airborne particles such as dust, smoke from a fire, or contamination from a chemical leak. Positive pressure systems are more energy-effective.

Line conditioners (also known as power conditioners) are used to improve the quality of power by performing one or more of the following:

- Removing noise caused by electromagnetic interference (EMI) and radio frequency interference (RFI)
- Providing small amounts of additional power to protect against power dips or sags
- Protecting against spikes and surges

Most UPS systems include line conditioners.

▼ **Question 7:**   ✔ Correct

Components within your server room are failing at a rapid pace. You discover that the humidity in the server room is at 60% and the temperature is at 80 degrees.

What should you do to help reduce problems?

○ Add line conditioners in the server room.

○ Add a de-humidifier to the server room.

➡ ◉ Add a separate A/C unit in the server room.

○ Add a humidifier to the server room.

EXPLANATION

Keep the temperature between 70 and 74 degrees to prevent components from overheating. In many cases, the server room is the hottest location in your building because of the heat generated by the computer components. In most cases, you need a separate A/C unit installed in the server room so that you can maintain temperature without affecting the rest of the building.

Keep humidity between 40% and 60% to prevent electrostatic discharge (ESD). Line conditioners (also known as power conditioners) are used to improve the quality of power by performing one or more of the following:

- Removing noise caused by EMI and RFI
- Providing small amounts of additional power to protect against power dips or sags
- Protecting against spikes and surges

▼ Question 8:   ✓ Correct

Which device is used to ensure power to a server or network device during short power outages?

➡ ⦿ Uninterruptible power supply

○ Line conditioner

○ Backup generator

○ Surge protector

EXPLANATION

An uninterruptible power supply (UPS) provides continuous power using batteries for a short period of time. Often, it is paired with a backup generator that can provide power over a longer time period when provided with enough fuel.

Although a UPS often contains both surge protection and line conditioning, neither can maintain power during an outage.

▼ Question 9:   ✗ Incorrect

Which of the following fire extinguisher types is best used for the electrical fires that might result when working with computer components?

○ Class A

⦿ ~~Class B~~

➡ ○ Class C

○ Class D

EXPLANATION

For electrical fires, choose a Class C fire extinguisher. Class C fire extinguishers use a gas (CO2 or Halon) to remove oxygen from a fire. When purchasing a fire extinguisher, purchase the type of extinguisher that is best suited for the type of fires that are likely to occur in that area.

A Class A fire extinguisher uses water or soda acid and is best for fires using typical combustible materials (wood, paper, cloth, plastics).

A Class B fire extinguisher uses either CO2 or FM200, but it is best suited for petroleum, oil, solvent, or alcohol fires.

A Class D fire extinguisher uses a dry powder and is best for sodium and potassium fires.

Question 10:   ✕ Incorrect

You walk by the server room and notice that a fire has started. What should you do first?

➡ ◯ Make sure everyone has cleared the area.

◉ ~~Grab a fire extinguisher and try to put out the fire.~~

◯ Turn on the overhead sprinklers.

◯ Call the fire department.

EXPLANATION

Your first action should be to ensure the safety of others. Make sure that people are out of the area. Fires and other hazards can quickly spread, so fast action is required to make sure that everyone is safe.

Call the fire department after you have taken steps to warn people who might be in danger. In most cases, you should not try to put out fires on your own, as they can quickly get out of control.