Exam Report: 2.1.8 Practice Questions

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Overall Performance

Your Score: 60%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Incorrect

Timothy works in the graphic arts departments and has received approval to upgrade his video card. The card has arrived, and you are ready to begin the upgrade.

To ensure your personal safety, which of the following should you do FIRST?

- Remove jewelry.
- Disconnect power.
- Put on safety glasses.
- ~~Place the computer on an ESD mat.~~

Explanation

Before you begin any internal service on a computer, you must always be sure that the computer is completely disconnected from the power source. Not removing power can lead to serious harm or death.

After the power is disconnected, you should remove any jewelry. Doing this eliminates the possibility of accidentally getting any electronic discharges.

Placing the computer on an ESD mat and using safety glasses would also be beneficial, but the first thing you should do is disconnect power.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_SAFM_DISCONNECT_POWER]

Question 2: Incorrect

Your U.S.-based company has recently purchased an old office building where employees are being assigned to work. As you are setting up the employees' desktop computers, you come to one location where the nearest wall outlet has only two prongs. All of the metal-enclosed desktop computers have three-prong cords.

Which of the following is the BEST way to proceed with that particular desktop computer?

- ~~Purchase an adapter that converts the three-prong cable to two prongs.~~
- Find a different outlet that uses three prongs.
- Use the existing cord, but remove the grounding prong, as it is not required.
- Get a new power cord with two prongs to match the wall outlet.

Explanation

The third, or middle, prong of a computer plug is the grounding prong. In the event of a malfunction, the

electricity flows through the grounding prong to the earth which, in turn, trips off the breaker, removing all electricity from that outlet. If the grounding prong is removed or bypassed and a malfunction occurs, the electricity will find the next shortest path to the earth, which may be a person who touches the computer. Having the electricity pass through a person could cause serious harm or even death.

You should never remove the third grounding prong or use an adapter to bypass the prong.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_SAFM_EQUIPMENT_GROUNDING]

Question 3: Incorrect

Of the following choices, which action could be most physically harmful to you?

- Looking into the end of a fiber optic cable.
- Using a computer without a surge protector.
- Wearing a grounding strap while installing a modem.
- ~~Force-ejecting a stuck DVD disc using a straightened paper clip.~~

Explanation

Never look into a fiber optic cable or any other possible source of laser light. Laser light can damage your eyes and even cause blindness. When working on a computer, you should use a grounding strap to protect the component from ESD damage. Using a computer without a surge protector could lead to computer damage, but doesn't have any effect on your personal safety. Ejecting an optical disc with a paper clip is an acceptable way to remove a disc if the drive door won't open.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_SAFM_FIBER_SAFETY]

Question 4: Incorrect

To improve the safety of your location and to comply with regulations regarding work environments with hazardous materials, you have been assigned to assemble Material Safety Data Sheets (MSDS) for all chemicals used in your shop.

How should you obtain these documents?

- Write them yourself after researching the issues.
- Ask your manager for them.
- Download them from the chemical manufacturer's websites.
- ~~Get them from your local workers' safety insurance office.~~

Explanation

Material Safety Data Sheets (MSDS) are written and made available by chemical manufacturers. You can download them from the manufacturer's website or request them from a company representative.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_SAFM_FIND_MSDS]

Question 5: Correct

What is the purpose of an MSDS?

- To protect service technicians from large voltages.
- To document how to safely handle and dispose of hazardous materials.

- To prevent dust from accumulating on electrical equipment.
- To monitor the potential for electrostatic discharge.

Explanation

A material safety data sheet (MSDS) documents how to safely handle and dispose of hazardous materials.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_SAFM_MSDS]

Question 6: Incorrect

The fan in a 450-Watt power supply is malfunctioning. What action should you take?

- Remove and replace the power supply.
- ~~Open the power supply and replace the defective fan unit.~~
- Do not service the computer until the CPU fan also fails.
- Open the power supply and oil the fan.

Explanation

Dangerous voltages can remain inside power supplies, even when they are unplugged. Do not attempt any repairs on a power supply except completely replacing the power supply unit.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_SAFM_POWER_SUPPLY_SAFETY]

Question 7: Correct

What is your top priority when responding to emergencies and hazardous situations?

- Ensure the safety of people in the area.
- Reduce risk and exposure to litigation.
- Protect your organization's data.
- Prevent the release of hazardous elements into the atmosphere.

Explanation

Your top priority is to protect the safety of individuals. Do this before taking any other actions to protect data or the environment.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_SAFM_SAFETY_PRIORITIES]

Question 8: Correct

Which of the following are safe methods of lifting heavy objects? (Select TWO.)

- [ ] Pull up with your arms.
- [ ] Bend at the waist.
- [x] Bend your knees with your back straight.
- [ ]

- [ ] Use a lifting strap around the object and your neck.
- [x] Lift with your legs.

Explanation

When lifting heavy objects, bend your knees, keep your back straight, and use your legs to lift objects. The other lifting methods listed may cause serious injury.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_SAFM_SAFE_LIFTING]

Question 9: Correct

A technician works in a factory where there is a significant amount of EMI (electromagnetic interference) emissions. Due to this EMI, several of the computers that control the factory's manufacturing machines are unable to communicate with the network.

Which of the following network cabling options would be the BEST for reestablishing network communications?

- (•) Fiber optic
- ( ) Coaxial
- ( ) Cat 5e
- ( ) Cat 7

Explanation

Fiber optic cabling is totally immune to EMI and provides the highest level of EMI protection.

Coaxial cabling is highly resistant to EMI, but is not as good as fiber optic cabling.

Due to the number of twists, Cat 7 cabling provides better protection from EMI than Cat 5e cabling. Cat 7 can also be procured with added EMI shielding. However, Cat 7, with or without shielding, is not as good as fiber optic cabling.

Cat 5e provides good protection from EMI. However, Cat 7, coaxial, and fiber optic cabling provide better protection.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_ESDP_COMPARE_CABLING]

Question 10: Correct

Which of the following will help reduce the threat of static discharge when working on computer hardware? (Select TWO.)

- [x] Remain in physical contact with the server chassis at all times.
- [ ] Place your hardware on an insulating layer of 1/4 inch Styrofoam.
- [x] Store unused components in static shielding bags.
- [ ] Leave the system plugged into a grounded wall outlet.
- [ ] Touch the leads on the PC components with your finger to dissipate any static charge.
- [ ] Reduce the humidity in the room to around 30%.

Explanation

To reduce the threat of static discharge when working on PC hardware, you should:

- Store unused components in static shielding bags.
- Remain in physical contact with the server chassis at all times.

Reducing the humidity would increase the likelihood of a static discharge. Leaving the system plugged into a grounded wall outlet may theoretically reduce the likelihood of a static discharge, but it's also extremely dangerous and should never be done. Always unplug your systems before working on them. Using Styrofoam near computer components increases the build up of static electricity and should be avoided. You should never touch the leads of a component. If a static discharge occurs, the current is carried directly to the most sensitive parts of the component.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_ESDP_ESD1]

Question 11: Correct

You work for a store that sells and repairs computers. Due to the room's layout, while repairing computers, you must walk from one side of the carpeted room to the other frequently.

Which of the following would BEST protect you from static electricity buildup?

- (selected) ESD wrist strap
- ESD heel strap
- ESD mat
- Self-ground

Explanation

Walking across a room, especially on carpet, will generate static electricity on your person. Discharging this electricity to a computer component may damage that component. Under these circumstances, it is best to use an electrostatic discharge (ESD) wrist strap to ensure proper grounding.

An ESD heel strap only works if the surface the technician is walking on is ESD-protected. Since this room has nothing but carpet, heel straps would be ineffective.

ESD mats neutralize the static buildup between the computer and mat, but it is still best if you connect yourself to the computer via an ESD wrist strap. Otherwise, the static electricity you gain by walking across the floor can still be discharged to a computer component you touch.

Although self-grounding is good, the fact that you are working on carpet means that additional static may build up if you shuffle your feet while working.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_ESDP_ESD_STRAP]

Question 12: Correct

To prevent ESD when replacing internal computer components, you attach an anti-static wrist strap to your wrist. Where should the other end be fastened? (Select TWO.)

- [ ] Ground wire on the power supply
- [x] (selected) Metal area on the computer case
- [ ] Ground wire on the wall power outlet
- [ ] Screw on the wall power outlet
- [x] (selected) Anti-static mat

Explanation

When using an anti-static wrist strap, you should connect the wrist strap to yourself and the other end to a ground such as the clip on the anti-static mat, or to an area on the computer case so that you and the computer are at the same electrical potential. Never connect the wrist strap to a power outlet, power supply, or ground on a power source.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_COM_ESDP_WRIST_STRAP]

Question 13: Incorrect

You work for a large company that has over 1000 computers. Each of these computes uses a wireless mouse and keyboard. Therefore, your company goes through a lot of alkaline batteries. When these batteries can no longer power the intended device, you must decide what to do with them.

Unless otherwise dictated by your local authorities, which of the following would be the EASIEST way to deal with these batteries?

- They can be thrown in the trash.
- They must be stored onsite until they expire.
- They can be recharged.
- ~~They must be sent to hazardous waste collection.~~

Explanation

Alkaline batteries manufactured after 1996 are made of relatively non-hazardous materials and can be tossed directly into the trash, in most states.

There is no need to send them to a hazardous waste collection. Alkaline batteries do not have an expiration date that needs to be meet before they can be thrown away.

Technically speaking, an Alkaline battery can be recharged, although most manufactures tell you not to recharge them. If you recharge an alkaline battery, you risk an explosion, and you will have a low-quality battery if the charge is successful.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_ENV_CNCRN_BATTERIES_1]

Question 14: Correct

Your company has a plan in place to upgrade each employee's laptop computer to a newer model every three years. As a result, you often have old laptop batteries.

Unless otherwise dictated by your local authorities, which of the following is the BEST way to deal with these types of batteries?

- They can be recharged.
- They must be stored on-site until they expire.
- They can be thrown in the trash.
- They must be recycled.

Explanation

Laptop batteries contain hazardous materials such as mercury, cadmium, and lead. These toxic substances harm the environment. If thrown away, they can enter the food chain, adversely affecting plants, animals, and humans. Therefore, these batteries must be recycled or given to a hazardous waste facility.

Since new computers come with their own new battery, there is no need to recharge and keep the old batteries. In addition, these batteries lose their holding capacity and will most likely not be able to power

a device for any useable length of time. Laptop batteries do not need to be keep on-site until a certain expiration date has been meet. Once you are done with them, they can be recycled or deposited at the hazardous waste facility.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_ENV_CNCRN_BATTERIES_2]

Question 15: Correct

Which of the following components requires special disposal procedures to comply with environmental guidelines?

- Hard disk drive
- Motherboard
- Notebook battery
- Video card

Explanation

Ni-Cad, NiMH, and other notebook battery types can contain regulated materials. Read the battery's documentation for a description of correct disposal procedures. Incorrect disposal can result in serious fines. While using special recycling services when disposing of computer components is environmentally friendly, most locations do not have laws regarding the disposal of most common components.

References

TestOut PC Pro - 2.1 Protection and Safety
[e_prot_pp6.exam.xml Q_ENV_CNCRN_DISPOSAL]