Oklahoma State Closed Circuit Television License Practice Test (Sample)

Study Guide

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Questions

1. What is the standard impedance for analog CCTV systems?

A. 50 ohms

B. 75 ohms

C. 100 ohms

D. 150 ohms

2. Under what condition can non-plenum rated cables be used in a plenum?

A. When installed in a plenum rated raceway

B. When they are covered with insulation

C. When they are installed underground

D. When used for temporary installations

3. Which of the following is NOT a feature of direct current?

A. Constant voltage

B. Variable flow

C. Steady direction

D. Unidirectional flow

4. According to NFPA 70, how must direct buried cables be arranged?

A. In coils to allow for expansion

B. So as to prevent damage when the ground settles

C. With protective conduit at all times

D. In a straight line only

5. Which is a common problem when using analog cables for video transmission over long distances?

A. Signal degradation

B. Improved image clarity

C. Lower bandwidth

D. Increased signal strength

6. When providing first aid to a victim of heat stroke, what should be done first?

A. Call for emergency services

B. Take steps to lower the person's body temperature

C. Provide water to drink

D. Move the person to a cooler area

7. What is the application and license fee for a technician or salesperson?

A. $39

B. $49

C. $59

D. $69

8. What should be done if a multimeter shows an open circuit?

A. Reset the device

B. Replace the multimeter

C. Inspect the circuit for breaks

D. Increase the voltage

9. Which of the following is true regarding confined space entry?

A. It requires no safety precautions

B. It can be done without a permit

C. It may require atmospheric testing

D. It is safe under all circumstances

10. How does reflective light impact camera performance?

A. It enhances the color quality of the video

B. It can create glare or wash out images

C. It has no effect on video clarity

D. It improves night-time visibility

Answers

1. B
2. A
3. B
4. B
5. A
6. B
7. B
8. C
9. C
10. B

Explanations

1. What is the standard impedance for analog CCTV systems?

A. 50 ohms

B. 75 ohms

C. 100 ohms

D. 150 ohms

The standard impedance for analog CCTV systems is 75 ohms. This specification is critical because it ensures optimal signal transmission and reduces the risk of reflections that can degrade video quality. In analog video applications, particularly those using coaxial cable, 75 ohms is used because it matches the impedance of the common video signals, which helps prevent signal loss and ensures a clear image. Utilizing coaxial cables with 75-ohm impedance minimizes issues like ghosting, loss of brightness, and other artifacts that can occur with poor matching of cable impedance to source or load. This is why the industry standard for components such as video cameras, monitors, and transmission cables in analog CCTV systems is set at 75 ohms, facilitating better compatibility and performance in video surveillance setups.

2. Under what condition can non-plenum rated cables be used in a plenum?

A. When installed in a plenum rated raceway

B. When they are covered with insulation

C. When they are installed underground

D. When used for temporary installations

Using non-plenum rated cables in a plenum is permitted when they are installed in a plenum-rated raceway. This is important because plenum spaces are areas designed for air circulation in heating and air conditioning systems, which can pose a significant fire hazard if non-plenum rated cables are used. Plenum-rated cables are specifically designed with materials that have a lower flame spread and produce less smoke when they burn, making them safer for use in such environments. By housing non-plenum rated cables in a plenum-rated raceway, the raceway provides a barrier that helps contain any potential fire hazards and limits the spread of smoke, thus adhering to safety codes and regulations. This approach allows for the use of non-plenum rated cables while still maintaining the safety and integrity required in plenum spaces, as the cable itself is not directly exposed to the plenum environment.

3. Which of the following is NOT a feature of direct current?

A. Constant voltage

B. Variable flow

C. Steady direction

D. Unidirectional flow

Direct current (DC) is characterized by a constant voltage that maintains a steady direction of flow. This means that the electrical charge moves in one direction only, which is referred to as unidirectional flow. This characteristic makes DC ideal for applications that require stable and predictable performance, such as powering electronic devices, batteries, and certain types of motors. The key feature of DC is its ability to maintain a constant voltage over time, and it flows steadily without fluctuations, unlike alternating current (AC), which varies in voltage and can flow in both directions. Therefore, the statement about variable flow is not a feature of direct current, as DC has a consistent and steady flow. This distinction is fundamental in understanding the properties of current types and their respective applications in electrical systems.

4. According to NFPA 70, how must direct buried cables be arranged?

A. In coils to allow for expansion

B. So as to prevent damage when the ground settles

C. With protective conduit at all times

D. In a straight line only

The arrangement of direct buried cables must be such that it prevents damage when the ground settles. This is crucial because ground movement can occur due to various factors like temperature changes, moisture content, and soil composition. If the cables are positioned in a way that does not accommodate settling or movement, there is a risk that they might become damaged, which can lead to service interruptions, safety hazards, or costly repairs. While other options may seem plausible, they do not address the fundamental requirement of ensuring the longevity and safety of the installation. For instance, while coils might allow for expansion, they do not inherently mitigate the risk of damage from ground settling. Similarly, using protective conduit can provide benefits but may not always be feasible or necessary depending on the installation context. Arranging cables in a straight line could contradict the need to allow for adaptability with ground conditions. Therefore, the best practice according to NFPA 70 is to place direct buried cables in a manner that accounts for potential ground movement to maintain their integrity.

5. Which is a common problem when using analog cables for video transmission over long distances?

A. Signal degradation

B. Improved image clarity

C. Lower bandwidth

D. Increased signal strength

Signal degradation is a well-known issue when using analog cables for video transmission over longer distances. As the signal travels along the cable, it can lose quality due to various factors, including resistance in the cable, interference from external sources, and the inherent limitations of analog technology itself. This degradation can result in poorer image quality, with possible manifestations such as blurriness, noise, or distortion. In contrast, enhanced image clarity would only be associated with high-quality video transmission setups, not with analog cables over long distances. Lower bandwidth is not a characteristic inherently tied to analog cable use; rather, it refers to the amount of data that can be transmitted, which can vary in different contexts. Increased signal strength is also not applicable here, as the longer the cable run, the weaker the signal generally becomes due to the aforementioned factors. Therefore, signal degradation stands out as the most applicable issue with analog cables over long distances.

6. When providing first aid to a victim of heat stroke, what should be done first?

A. Call for emergency services

B. Take steps to lower the person's body temperature

C. Provide water to drink

D. Move the person to a cooler area

When addressing a victim of heat stroke, taking immediate action to lower the person's body temperature is a critical step and indeed the most urgent response required. Heat stroke occurs when the body overheats and is unable to cool itself, which can lead to serious complications or even death. The first priority is to mitigate the high body temperature as quickly as possible. Lowering body temperature can be achieved through various methods, such as removing excess clothing, applying cool, wet cloths to the skin, or using fans to circulate air. This proactive measure directly addresses the physiological crisis the victim is experiencing and can stabilize their condition while waiting for professional medical assistance. While calling for emergency services, providing water, and moving the individual to a cooler area are all important actions to take in the overall response to heat-related emergencies, they should follow the immediate need to reduce the body temperature to prevent further damage. Handling the condition in this prioritized manner enhances the victim's chances of survival and recovery.

7. What is the application and license fee for a technician or salesperson?

A. $39

B. $49

C. $59

D. $69

The application and license fee for a technician or salesperson in Oklahoma is $49. This fee is set by the state's licensing authority to cover the administrative costs associated with processing license applications, conducting background checks, and maintaining the licensing system. It is important for applicants to be aware of this fee as it is a necessary step in obtaining the proper credentials to work legally in the field. Understanding the financial obligations involved in the licensing process is crucial for anyone entering the industry as it ensures compliance and professionalism.

8. What should be done if a multimeter shows an open circuit?

A. Reset the device

B. Replace the multimeter

C. Inspect the circuit for breaks

D. Increase the voltage

When a multimeter indicates an open circuit, it is essential to inspect the circuit for breaks. An open circuit means that there is a discontinuity in the path through which current could flow, and this is why the multimeter is unable to detect any voltage or current. By inspecting the circuit, one can identify physical damage, loose connections, or points where wires might have been disconnected. This proactive approach allows for diagnosing the issue and determining the corrective measures needed to restore functionality to the circuit. Other options may not lead to identifying the problem effectively. Resetting the device would not help if the circuit itself has a break, while replacing the multimeter could be unnecessary if the issue lies within the circuit. Increasing the voltage is also inappropriate, as this does not address the underlying issue of the broken circuit. Therefore, inspecting the circuit is the most logical and effective step to take when encountering an open circuit as indicated by the multimeter.

9. Which of the following is true regarding confined space entry?

A. It requires no safety precautions

B. It can be done without a permit

C. It may require atmospheric testing

D. It is safe under all circumstances

Confined space entry involves specific risks that can pose significant hazards to workers. One critical safety measure in confined space work is atmospheric testing, which is necessary to identify potential dangers such as toxic gases, low oxygen levels, or flammable materials. Before entering a confined space, it is crucial to assess the atmosphere to ensure it is safe for workers. This involves testing the air for any harmful substances or conditions that could lead to injury or fatalities. The need for atmospheric testing is a standard safety protocol mandated by regulations, emphasizing the importance of understanding and mitigating the hazards present in a confined space environment. Conducting these tests helps to ensure that safety measures are in place and that workers have the necessary information to proceed safely when entering such spaces.

10. How does reflective light impact camera performance?

A. It enhances the color quality of the video

B. It can create glare or wash out images

C. It has no effect on video clarity

D. It improves night-time visibility

Reflective light significantly affects camera performance, and one of the primary issues it can cause is glare. When reflective surfaces, such as windows, shiny floors, or objects with a polished finish, are in the field of view of a camera, they can cause bright spots or overwhelming illumination in the image. This glare can lead to washed-out areas where detail is lost, making it difficult to discern objects or faces in those regions. Additionally, excessive reflection can obscure the intended scene, ultimately reducing the quality and clarity of the video. Understanding the impact of reflective light is crucial in settings where surveillance or monitoring is important, as it can compromise the effectiveness of a camera system in capturing high-quality images. Therefore, recognizing how glare can adversely influence camera images is essential for setting up a reliable closed-circuit television system.