Electrical Job Information Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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Questions



- 1. How often must Type AC armored cable be secured?
 - A. 6 feet
 - **B.** 4.5 feet
 - C. 3 feet
 - D. 5 feet
- 2. How many classifications are there for concrete blocks based on the weight of the mix?
 - A. 2
 - **B**. 3
 - C. 4
 - D. 5
- 3. What should be reviewed as part of the cable pull safety check?
 - A. Manufacturer's instruction manuals
 - B. Employee safety guidelines
 - C. Job hazard assessments
 - **D.** Construction codes
- 4. What does the F rating indicate in relation to firestop systems?
 - A. The time the system can withstand heat
 - B. The time it can prevent the passage of fire
 - C. The minimum temperature resistance of the material
 - D. The maximum allowed joint width
- 5. What are the primary load-bearing portions of a concrete frame constructed building called?
 - A. Beams
 - **B. Slabs**
 - C. Columns
 - D. Walls

- 6. Which of the following is not a valid application for type SE conductors?
 - A. Indoor installation
 - **B.** Outdoor installation
 - C. Underwater installation
 - D. Above ground installation
- 7. What is a 7/8" channel or strut typically used for?
 - A. Mounting electrical components
 - **B. Sealing pipes**
 - C. Providing insulation
 - D. Holding light fixtures
- 8. What is generally the first step in using a pipe wrench?
 - A. Aligning with the pipe
 - B. Adjusting the jaw size
 - C. Applying pressure
 - D. Tightening the grip
- 9. What does mortar typically consist of?
 - A. Clay, sand, and water
 - B. Portland Cement, sand, lime, and water
 - C. Concrete mix and grout
 - D. Gypsum, sand, and aggregates
- 10. In construction, what is the purpose of formwork?
 - A. To provide structural support while curing
 - B. To mix concrete
 - C. To measure concrete accurately
 - D. To insulate buildings

Answers



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



Explanations



1. How often must Type AC armored cable be secured?

- A. 6 feet
- **B.** 4.5 feet
- C. 3 feet
- D. 5 feet

Type AC armored cable must be secured at intervals not exceeding 4.5 feet. This requirement is important for ensuring the cable is properly supported and that there is minimal risk of damage or wear due to movement or strain. Proper securing prevents issues such as loosening or excessive bending, which can cause insulation damage, leading to potential electrical hazards. Knowing the specific requirements for securing armored cable is vital for compliance with electrical codes and practices. It helps ensure safety in the installation and use of electrical systems. While options like 3 feet, 5 feet, and 6 feet might seem reasonable for securing different types of cables, the specific requirement for Type AC armored cable is established at 4.5 feet for safety and performance reasons.

2. How many classifications are there for concrete blocks based on the weight of the mix?

- A. 2
- **B.** 3
- C. 4
- D. 5

Concrete blocks can be classified based on their density or weight per unit volume, which is primarily influenced by the materials used in the mix. There are three main classifications commonly recognized: lightweight, medium weight, and heavyweight. Lightweight concrete blocks are made with aggregates that have a lower density, such as expanded clay or pumice, which results in a block that is easier to handle and provides better insulation properties. Medium weight concrete blocks are made with normal-weight aggregates but still maintain a reasonable weight that is suitable for various applications. Heavyweight concrete blocks, on the other hand, are made with denser aggregates, such as barite, providing high mass and durability, often used in applications requiring radiation shielding or structural strength. Recognizing these three classifications is essential for understanding how different types of concrete blocks can be used in construction based on their respective properties and applications. This classification also helps in selecting the appropriate concrete block for specific structural or thermal requirements.

3. What should be reviewed as part of the cable pull safety check?

- A. Manufacturer's instruction manuals
- B. Employee safety guidelines
- C. Job hazard assessments
- **D.** Construction codes

The correct answer emphasizes the importance of reviewing manufacturer's instruction manuals as part of a cable pull safety check. These manuals provide specific guidelines and procedures that are crucial for ensuring that the cable is installed correctly and safely. They often contain detailed information regarding the cable's specifications, such as maximum pulling tension, recommended techniques for pulling, and safety precautions relevant to the specific type of cable being used. Understanding the manufacturer's instructions is essential because it will help workers avoid potential hazards related to the handling and installation of the cable. Failure to adhere to these guidelines could lead to improper installation or even accidents that could harm personnel or damage equipment. While reviewing employee safety guidelines, job hazard assessments, and construction codes is also important for overall safety on the job site, the manufacturer's instruction manuals directly address the specifics of the cable being used, making them the most critical resource during a cable pull operation.

- 4. What does the F rating indicate in relation to firestop systems?
 - A. The time the system can withstand heat
 - B. The time it can prevent the passage of fire
 - C. The minimum temperature resistance of the material
 - D. The maximum allowed joint width

The F rating is a crucial measure for firestop systems, as it specifically indicates the time duration for which the system can effectively prevent the passage of fire through openings in walls or floors. This rating is critical because it signifies the level of fire protection a firestop system offers, ensuring that during a fire, the spread of flames and smoke is minimized, thereby providing critical time for evacuation and fire suppression efforts. The effectiveness of firestop systems is assessed under standardized testing conditions, and the F rating reflects how long it can maintain its integrity and resist fire exposure. Hence, a higher F rating means that the system has been tested for longer periods during which it successfully prevents fire from spreading past the firestop installation.

5. What are the primary load-bearing portions of a concrete frame constructed building called?

- A. Beams
- **B. Slabs**
- C. Columns
- D. Walls

The primary load-bearing portions of a concrete frame constructed building, known as columns, are vertical structural elements designed to support loads from the beams and slabs above. Columns transfer the weight of the structure down to the foundation, distributing the loads evenly to ensure stability and integrity of the building. They are integral in maintaining the overall strength and stability of the structure, allowing for the creation of open spaces in the building design without the need for additional load-bearing walls. While beams, slabs, and walls contribute to the overall structural system, they serve different functions. Beams support the horizontal loads of slabs and redistribute those loads to the columns. Slabs form the floors and ceilings of the building, providing a surface for occupants and equipment, but they do not directly bear the primary vertical loads in the way that columns do. Walls, particularly in a concrete frame structure, often serve as non-load-bearing elements that provide separation between spaces or support additional loads such as finishes and fixtures. Therefore, the role of columns in bearing loads distinguishes them as the primary load-bearing components.

6. Which of the following is not a valid application for type SE conductors?

- A. Indoor installation
- **B.** Outdoor installation
- C. Underwater installation
- D. Above ground installation

Type SE conductors, or Service Entrance conductors, are primarily used for the delivery of electrical power from the utility service to the service equipment in a building. The characteristic features that make SE conductors suitable for various environments include their capacity to withstand moisture and some exposure to the elements, but they are not specifically designed for submersion or consistent exposure to water conditions. When evaluating the applicability of Type SE conductors, indoor installations, outdoor installations, and above-ground installations are generally acceptable due to the durability and insulation provided in their design. However, underwater installations involve unique challenges, such as the need for specialized sheathing to withstand high moisture and pressure levels without degrading. Type SE conductors lack the necessary waterproof characteristics and mechanical protection required for effective underwater usage, which is why they are not considered a valid application in that scenario. Thus, identifying underwater installation as not a valid application highlights the limitations of Type SE conductors when it comes to environments with continuous or prolonged exposure to water.

7. What is a 7/8" channel or strut typically used for?

- A. Mounting electrical components
- B. Sealing pipes
- C. Providing insulation
- D. Holding light fixtures

A 7/8" channel or strut is primarily utilized for mounting electrical components. This type of channel provides a versatile and sturdy framework that can easily accommodate a variety of electrical devices, such as conduits, circuit breakers, and other equipment. The design of the channel allows for the attachment of various hardware and brackets, making it ideal for creating support structures that ensure proper alignment and safety of electrical installations. This mounting capability is critical in both commercial and residential environments where electrical components need to be securely fastened in place. The width of 7/8" strikes a balance between providing adequate strength for the components it supports, while also being manageable for installation and adjustments. Additionally, the strut's ability to be cut to length and used with compatible accessories allows for a high degree of customization based on the specific requirements of a project, making it a staple in the electrical field.

8. What is generally the first step in using a pipe wrench?

- A. Aligning with the pipe
- B. Adjusting the jaw size
- C. Applying pressure
- D. Tightening the grip

The first step in using a pipe wrench involves adjusting the jaw size to fit the specific diameter of the pipe. This adjustment ensures that the wrench will properly grip the pipe without causing damage or slipping during use. Selecting the appropriate jaw size helps to maximize the efficiency of the tool, allowing for effective turning and manipulation of the pipe. Once the adjustment is made, the wrench can be aligned with the pipe and secured in place. After that, pressure can be applied, and the grip tightened as needed while the tool is in use. This sequence of actions is crucial because it ensures safety and effectiveness while working, and starting with the correct jaw size adjustment lays a solid foundation for the subsequent steps.

9. What does mortar typically consist of?

- A. Clay, sand, and water
- B. Portland Cement, sand, lime, and water
- C. Concrete mix and grout
- D. Gypsum, sand, and aggregates

Mortar is a crucial material used in construction, serving as a bonding agent for masonry units such as bricks and stones. The correct composition of mortar typically includes Portland cement, sand, lime, and water. Portland cement acts as the primary binder, providing strength and durability. Sand is mixed in to control the consistency and workability of the mixture, while lime improves the plasticity and increases the water retention, allowing for better adhesion and flexibility. Water is essential for the hydration process, which helps in curing and achieving the desired strength of the final product. The combination of these materials ensures that mortar has the necessary properties for effective bonding in construction applications. Unlike some other mixtures such as concrete, which would include aggregates and have different purposes and strengths, mortar is specifically formulated for masonry work. This mixture enables it to perform its function effectively in various building applications, making it indispensable in both residential and commercial construction projects.

10. In construction, what is the purpose of formwork?

- A. To provide structural support while curing
- B. To mix concrete
- C. To measure concrete accurately
- D. To insulate buildings

Formwork serves a critical purpose in construction by providing a temporary structure that supports the weight of the concrete until it is fully cured and can support itself. This support is essential, as freshly poured concrete is fluid and lacks the strength to hold its shape or any additional loads. The formwork holds the concrete in place and shapes it into the desired dimension, allowing it to set properly and acquire its strength over time. Once the concrete has reached the appropriate strength, the formwork can be removed. The other options, while related to aspects of concrete work or construction, do not represent the primary purpose of formwork. Formwork is not used for mixing concrete, measuring it, or insulating buildings, which are distinct processes and functions in the building process.