

NCCER Wireways, Raceways & Fittings Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

Copyright © 2025 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain from reliable sources accurate, complete, and timely information about this product.

SAMPLE

Questions

- 1. Which of the following is NOT a purpose of a conduit?**
 - A. Protection of electrical wires**
 - B. Support for electrical devices**
 - C. Heat insulation**
 - D. Grounding of circuits**
- 2. Which material is commonly used for underground raceways due to its resistance to moisture?**
 - A. Steel**
 - B. PVC (polyvinyl chloride)**
 - C. Copper**
 - D. Fiber optic**
- 3. What is a key feature of the Type T Conduit body?**
 - A. Only allows straight runs**
 - B. Used to connect three conduits**
 - C. Not suitable for wet locations**
 - D. Designed for horizontal installations only**
- 4. What type of nut is used when making a conduit to box connection and installing a bonding wire?**
 - A. Standard lock nut**
 - B. Wing nut**
 - C. Lock washer**
 - D. Hex nut**
- 5. What is a wireway?**
 - A. A wireway is a metal or non-metallic raceway used to route and protect electrical wires and cables.**
 - B. A wireway is a type of electrical connection used for high voltage applications.**
 - C. A wireway is an insulated coating applied to electrical wires.**
 - D. A wireway is a device that regulates the flow of electricity.**

- 6. How do you connect FMC to RMC or EMT?**
- A. Using a straight connector**
 - B. With a combination coupler/connector**
 - C. By soldering**
 - D. With a threaded coupling**
- 7. Which safety standard should be referenced when installing raceways?**
- A. ISO 9001**
 - B. OSHA Guidelines**
 - C. National Electrical Code (NEC)**
 - D. National Fire Protection Association (NFPA) standards**
- 8. What critical role do fittings play in raceways?**
- A. They are only decorative**
 - B. They facilitate the connection of raceways to devices**
 - C. They prevent electrical currents from escaping**
 - D. They provide locations for future conduit expansions**
- 9. In terms of safety, what feature should be considered for outdoor raceway systems?**
- A. Flexibility of installation**
 - B. Resistance to environmental factors**
 - C. Ease of installation**
 - D. Cost-effectiveness**
- 10. What installation challenge might arise with rigid conduit in cold climates?**
- A. Increased brittleness and risk of cracking**
 - B. Higher costs due to insulation requirements**
 - C. Easier installation due to lower temperatures**
 - D. Better performance under low temperatures**

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Which of the following is NOT a purpose of a conduit?

- A. Protection of electrical wires**
- B. Support for electrical devices**
- C. Heat insulation**
- D. Grounding of circuits**

The primary purposes of a conduit are to provide physical protection to electrical wires, to offer support for electrical devices, and to facilitate grounding of circuits. When considering these functions, heat insulation is not typically one of the key purposes associated with conduit systems. Conduits are primarily designed to safeguard wiring from environmental factors, mechanical damage, and other hazards that could compromise the integrity of the electrical system. They also play an important role in routing and supporting various electrical devices, ensuring that they are secure and properly positioned. Grounding of circuits is another critical function that conduits can serve, as they help ensure that electrical systems have a safe path to dissipate fault currents, which is essential for both safety and compliance with electrical codes. In contrast, while heat insulation may be important in specific applications or materials, it does not directly align with the fundamental roles that conduits are intended to fulfill in an electrical installation. Therefore, identifying heat insulation as a function not associated with conduits is accurate.

2. Which material is commonly used for underground raceways due to its resistance to moisture?

- A. Steel**
- B. PVC (polyvinyl chloride)**
- C. Copper**
- D. Fiber optic**

PVC (polyvinyl chloride) is commonly used for underground raceways primarily because of its excellent resistance to moisture. This property makes it ideal for protecting electrical wiring and other components from the detrimental effects of water, soil, and other environmental factors typically found underground. PVC is non-corrosive, lightweight, and easy to install, which further enhances its suitability for this application. In contrast, steel and copper are metals that, while strong and durable, can rust or corrode when exposed to moisture unless properly coated or treated. Fiber optic materials also do not share the same level of moisture resistance as PVC and are more sensitive to installation conditions and environments. Thus, the unique properties of PVC make it the preferred choice for underground installations where moisture resistance is critical.

3. What is a key feature of the Type T Conduit body?

- A. Only allows straight runs**
- B. Used to connect three conduits**
- C. Not suitable for wet locations**
- D. Designed for horizontal installations only**

The Type T Conduit body is specifically designed to facilitate connections between three conduit runs. This key feature allows for a branching of conduits, making it versatile for various electrical installation scenarios where multiple pathways are required. The design allows for efficient cable pulling and splicing while maintaining system integrity. In contrast, other conduit bodies serve different purposes. For example, some are designed only for straight runs, while others might be limited to specific orientations or environments. The Type T's ability to connect three conduits is crucial in configurations where multiple circuits need to be routed from a single junction point, providing essential flexibility in electrical design and installation.

4. What type of nut is used when making a conduit to box connection and installing a bonding wire?

- A. Standard lock nut**
- B. Wing nut**
- C. Lock washer**
- D. Hex nut**

The use of a standard lock nut for making a conduit to box connection and installing a bonding wire is essential because it provides a secure fastening that minimizes the risk of loosening due to vibrations or thermal expansion. Lock nuts have a unique design that allows them to grip tightly onto the threads of the conduit fitting, ensuring that the connection remains stable over time. This is particularly important in electrical installations, where maintaining proper connections is crucial for safety and functionality. In the context of bonding wires, a secure connection is vital for providing a low-resistance path to ground, which helps in preventing electrical shock and safeguarding equipment. The standard lock nut is specifically designed for this purpose, making it the appropriate choice for this application. Other types of nuts, like wing nuts and hex nuts, do not provide the same level of grip and security in situations where vibrations may cause loosening, while lock washers serve a different function and are used to prevent loosening but are not typically used to secure conduit connections.

5. What is a wireway?

- A. A wireway is a metal or non-metallic raceway used to route and protect electrical wires and cables.**
- B. A wireway is a type of electrical connection used for high voltage applications.**
- C. A wireway is an insulated coating applied to electrical wires.**
- D. A wireway is a device that regulates the flow of electricity.**

A wireway serves as a crucial component in electrical installations, specifically designed to route and protect electrical wires and cables. Typically constructed from metal or non-metallic materials, it provides a structured path for wires, ensuring they are safeguarded from physical damage, environmental factors, and interference. This is essential for maintaining the integrity of electrical systems and ensuring safe operation. In contrast to the other options, which either describe different electrical components or functions, the definition of a wireway highlights its primary purpose of wire management and protection. For instance, while a wireway is not an electrical connection for high voltage applications, it often accommodates the wiring for those types of systems. Additionally, it is distinct from an insulated coating, which refers to a protective layer on the wire itself rather than a containment system like a wireway. Furthermore, a wireway does not function as a device to regulate electricity flow; rather, it serves to organize and protect the wires that carry electrical current.

6. How do you connect FMC to RMC or EMT?

- A. Using a straight connector**
- B. With a combination coupler/connector**
- C. By soldering**
- D. With a threaded coupling**

The correct method to connect Flexible Metal Conduit (FMC) to Rigid Metal Conduit (RMC) or Electrical Metallic Tube (EMT) is by using a combination coupler/connector. This type of fitting is specifically designed to accommodate the different properties of FMC, which is flexible, and RMC or EMT, which are rigid. The combination coupler allows for a secure and effective transition between the two types of conduits, ensuring that there is a solid electrical connection while also maintaining the conduit system's overall integrity. Using a straight connector would not be suitable as it lacks the necessary design to safely connect the differing types of conduits. Soldering is not appropriate for FMC, RMC, or EMT, as these conduits are typically joined using mechanical methods rather than soldered connections. A threaded coupling is also not the right choice since it is designed for rigid connections and would not accommodate the flexibility of FMC effectively. The key to proper installation is ensuring that the connection allows for the movement and flexibility required by FMC while still providing a secure connection to the more rigid systems.

7. Which safety standard should be referenced when installing raceways?

A. ISO 9001

B. OSHA Guidelines

C. National Electrical Code (NEC)

D. National Fire Protection Association (NFPA) standards

When installing raceways, the National Electrical Code (NEC) is the primary safety standard to reference. The NEC provides comprehensive requirements and guidelines for the safe installation of electrical wiring and equipment in the United States. It ensures that raceways are installed in a manner that reduces the risk of electrical hazards, such as short circuits and fires. The code addresses aspects such as materials, bonding, grounding, and proper raceway sizing, all of which are crucial for maintaining electrical safety and system integrity. While the other standards mentioned, including OSHA guidelines, focus on workplace safety and health regulations, and NFPA standards may cover broader fire prevention measures, the NEC specifically governs electrical installations, making it the most relevant standard when working with raceways. Therefore, for those engaged in electrical installations or assessments, familiarity with the NEC is essential for compliance and ensuring safety in their work practices.

8. What critical role do fittings play in raceways?

A. They are only decorative

B. They facilitate the connection of raceways to devices

C. They prevent electrical currents from escaping

D. They provide locations for future conduit expansions

Fittings play a crucial role in the functionality of raceways by facilitating the connection of raceways to devices. They are essential components that ensure a secure and effective transition from one section of raceway to another, as well as from the raceway to various electrical devices such as outlets, junction boxes, and switches. Proper use of fittings ensures that the raceways maintain their integrity and efficiency, allowing for safe and reliable electrical installations. This ability to connect raceways to devices is vital in both residential and industrial settings, as it supports the overall electrical system by providing necessary pathways for electrical conductors while enabling access points for maintenance or upgrades. Other options may suggest less relevant functions, such as aesthetics or future expansions, but the primary and most critical function remains the facilitation of connections to devices.

9. In terms of safety, what feature should be considered for outdoor raceway systems?

- A. Flexibility of installation**
- B. Resistance to environmental factors**
- C. Ease of installation**
- D. Cost-effectiveness**

When considering the safety of outdoor raceway systems, resistance to environmental factors is of paramount importance. Outdoor installations are subjected to various elements, including moisture, UV radiation, extreme temperatures, and potential chemical exposure. Materials used in outdoor raceway systems must be able to withstand corrosion, degradation, and physical damage caused by these environmental influences. Choosing raceway systems that offer high resistance to these conditions ensures not only the longevity of the system but also maintains the integrity of the electrical installations within. This ultimately reduces safety hazards, such as electrical failures or fires that could arise from compromised wiring or connections due to exposure to harsh conditions. Therefore, ensuring that raceway systems have features like UV resistance or waterproofing is critical to promoting safety in outdoor environments.

10. What installation challenge might arise with rigid conduit in cold climates?

- A. Increased brittleness and risk of cracking**
- B. Higher costs due to insulation requirements**
- C. Easier installation due to lower temperatures**
- D. Better performance under low temperatures**

In cold climates, one of the primary challenges with installing rigid conduit is that materials can become more brittle as temperatures drop. This increase in brittleness can make the conduit more prone to cracking during installation, especially if the conduit is subjected to bending or impact. Cold temperatures can affect various materials differently; metals and certain plastic conduits may lose some of their flexibility and toughness, meaning that care must be taken during installation to avoid damaging the conduit. In contrast, the other options do not accurately reflect the issues associated with rigid conduit in cold weather. For instance, higher costs related to insulation or improved performance under low temperatures would not be typical concerns specifically tied to the installation of rigid conduit. Additionally, lower temperatures generally do not make installation easier; rather, they can complicate the process due to the nature of the materials becoming more fragile.