

National Electrical Code (NEC) Article 225 Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

- 1. When is the use of cable assemblies instead of conductors permitted?**
 - A. For short distances only**
 - B. Where specifically allowed by NEC**
 - C. In above-ground applications**
 - D. Only in residential wiring**
- 2. Which of the following types of wiring is suitable for installation on the surfaces of buildings?**
 - A. Type SE Cable**
 - B. Type NM Cable**
 - C. Type MC Cable**
 - D. Type UF Cable**
- 3. According to the NEC, what is one of the requirements for disconnect construction?**
 - A. Must be constructed from plastic materials**
 - B. Must meet specific design and operational criteria**
 - C. Must include a manual override only**
 - D. Must be wirelessly operated**
- 4. What is the purpose of Article 225 in the NEC?**
 - A. To establish fire safety measures**
 - B. To regulate indoor wiring practices**
 - C. To establish standards for safe and effective installation of outside branch circuits and feeders**
 - D. To control energy consumption in electrical installations**
- 5. What is required regarding the adjustment of protective circuits?**
 - A. Adjustments can be made after installation**
 - B. All adjustments should follow a set standard**
 - C. Adjustments must be made on visual inspections**
 - D. Adjustments should not be performed at all**

- 6. What is the NEC's guideline regarding the height of service drops over roofs?**
- A. They must be at least 2 feet above roofs**
 - B. They must have a minimum clearance of 3 feet above roofs**
 - C. They can be at roof level**
 - D. They must be at least 4 feet above roofs**
- 7. What is a critical installation consideration for overhead service drops near swimming pools?**
- A. They should be installed at eye level**
 - B. They must maintain specified clearances from water bodies**
 - C. They can be installed without any clearances**
 - D. They should be buried underground**
- 8. What is one of the purposes of the feeder or branch-circuit disconnecting means?**
- A. To reduce electrical shocks**
 - B. To allow for manual control of appliances**
 - C. To provide overload protection**
 - D. To ensure all circuits are offline during maintenance**
- 9. Which of the following describes the requirement for conductors in overhead service drops?**
- A. They must be insulated**
 - B. They must be rated for underground use**
 - C. They must be weather-resistant**
 - D. They must be compliant with NEC ampacity tables**
- 10. How many conductors can be run in a conduit for a branch circuit?**
- A. Only one conductor is allowed**
 - B. Up to 5 conductors regardless of size**
 - C. Based on size and fill requirements**
 - D. Only 2 conductors, regardless of size**

Answers

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

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Explanations

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1. When is the use of cable assemblies instead of conductors permitted?

- A. For short distances only**
- B. Where specifically allowed by NEC**
- C. In above-ground applications**
- D. Only in residential wiring**

The use of cable assemblies instead of individual conductors is permitted where specifically allowed by the National Electrical Code. This refers to instances outlined in the NEC where cable assemblies meet certain requirements for installation, which may include considerations for safety, accessibility, and appropriate applications in different types of environments. For example, specific sections of the code detail where and how different types of cable assemblies can be utilized, including conditions under which they are suitable for particular installations. Utilizing cable assemblies can offer benefits such as ease of installation, reduced risk of accidental damage to individual conductors, and enhanced protection of the wiring system. However, the NEC's stipulations ensure that such instances are clearly defined, maintaining safety standards across residential, commercial, and industrial applications. The other options, while relevant in the broader scope of electrical installations, do not encapsulate the essence of the NEC's regulations regarding the use of cable assemblies. Hence, the choice indicating that cable assemblies are permitted where specifically allowed by the NEC is the most accurate and ties directly into the code's requirements and guidelines.

2. Which of the following types of wiring is suitable for installation on the surfaces of buildings?

- A. Type SE Cable**
- B. Type NM Cable**
- C. Type MC Cable**
- D. Type UF Cable**

Type MC Cable, or Metal-Clad Cable, is designed specifically for surface installations and is suitable for adequately protecting conductors in harsh environments, as it consists of a metal sheath that provides mechanical protection. This characteristic makes it well-suited for outdoor use, including surface wiring on buildings, where exposure to physical damage or environmental factors may occur. The metal sheath of Type MC Cable not only offers durability but also serves as a grounding means. In comparison, while Type SE Cable and Type NM Cable have their own applications, they are typically used for specific conditions that do not include surface installation against building exteriors. Type UF Cable is intended for underground use and while it can be used above ground in some cases, it does not offer the same level of protection and versatility as MC Cable for surface-mounted applications thereby reinforcing the suitability of Type MC for the question asked.

3. According to the NEC, what is one of the requirements for disconnect construction?

- A. Must be constructed from plastic materials**
- B. Must meet specific design and operational criteria**
- C. Must include a manual override only**
- D. Must be wirelessly operated**

The requirement for disconnect construction according to the National Electrical Code (NEC) is that it must meet specific design and operational criteria. This means that disconnects must be designed to ensure safety and proper operation under anticipated electrical conditions. They need to have features that allow for the safe interruption of electrical circuits, including adequate insulation, accessibility for operation and maintenance, and appropriate labeling. These criteria ensure that the disconnect can be reliably used in emergencies, maintenance, or when safety conditions dictate that power must be turned off. Focusing on meeting these specific design and operational criteria helps to protect personnel working on electrical systems, minimize the risk of equipment damage, and ensure compliance with the NEC standards. This reflects the emphasis the NEC places on safety and functionality in electrical installations.

4. What is the purpose of Article 225 in the NEC?

- A. To establish fire safety measures**
- B. To regulate indoor wiring practices**
- C. To establish standards for safe and effective installation of outside branch circuits and feeders**
- D. To control energy consumption in electrical installations**

The purpose of Article 225 in the National Electrical Code (NEC) is to establish standards for the safe and effective installation of outside branch circuits and feeders. This article specifically addresses the installation and arrangement of electrical conductors that extend outdoors, ensuring that they are protected from environmental hazards and are installed in a manner that is safe for both people and property. Article 225 includes guidelines on the proper methods for connecting these circuits to service equipment, the requirements for conductors and raceways, and specifications for overcurrent protection. It is crucial for maintaining the safety and integrity of electrical systems that service outdoor locations, such as lighting for parking lots, exterior outlets, and power supplies for outdoor equipment. Understanding the focus of Article 225 aids in ensuring compliance with safety standards and helps electricians design systems that minimize risks associated with weather exposure and physical damage, thereby enhancing the reliability and longevity of outdoor electrical installations.

5. What is required regarding the adjustment of protective circuits?

- A. Adjustments can be made after installation**
- B. All adjustments should follow a set standard**
- C. Adjustments must be made on visual inspections**
- D. Adjustments should not be performed at all**

Adjustments to protective circuits are critical for ensuring that they function correctly and provide the necessary level of protection. Following a set standard for these adjustments is essential because it helps maintain reliability and safety across electrical installations. Adhering to established standards ensures that adjustments are made based on verified procedures, which take into account factors such as system performance, safety requirements, and manufacturer specifications. When adjustments are made according to these standards, it ensures consistency in outcomes and reduces the risk of variances that could potentially lead to hazardous conditions or equipment failure. This systematic approach is crucial for compliance with safety codes and regulations, as well as for enhancing the longevity of the equipment being adjusted. By following a set standard, trained personnel can ensure that the protective circuits operate effectively within their designed parameters, thus safeguarding both the electrical system and the overall facility.

6. What is the NEC's guideline regarding the height of service drops over roofs?

- A. They must be at least 2 feet above roofs**
- B. They must have a minimum clearance of 3 feet above roofs**
- C. They can be at roof level**
- D. They must be at least 4 feet above roofs**

The NEC states that service drops must have a minimum clearance of 3 feet above the roof line. This requirement is in place to ensure safety and accessibility, allowing adequate space for maintenance and reducing risks linked to potential electrical hazards. The 3-foot clearance is crucial as it helps to prevent unintentional contact with the service drop while performing activities on the roof. In addition to safety concerns, this height requirement helps to protect the service drop from physical damage that could occur from objects such as debris or from personnel working on or near the roof. By maintaining a clear distance, it minimizes the chance of the service drop being compromised during routine maintenance or unexpected events. This guideline reflects the NEC's commitment to ensuring that electrical installations are safe for both users and maintenance personnel, thereby emphasizing proactive measures in equipment design and installation standards in various environments.

7. What is a critical installation consideration for overhead service drops near swimming pools?

- A. They should be installed at eye level**
- B. They must maintain specified clearances from water bodies**
- C. They can be installed without any clearances**
- D. They should be buried underground**

The correct focus for the installation of overhead service drops near swimming pools is the requirement to maintain specified clearances from water bodies. This requirement is crucial because it ensures the safety of individuals who use the pool and mitigates the risk of electrical hazards. The National Electrical Code specifies minimum height and clearance distances for overhead conductors to prevent accidental contact with water, which can create dangerous electrical shock risks. By enforcing these clearances, the code aims to protect both the general public and the electrical infrastructure from potential hazards associated with water and electricity. The presence of water increases the likelihood of conductivity, making it essential that overhead lines do not extend too low over swimming pool areas or nearby bodies of water where people may be present. The requirements help ensure a safe environment around recreational water areas, reflecting a proactive approach to electrical safety. Understanding these regulations is vital for any electrical installer or inspector to prevent accidents and promote safety standards in residential and commercial settings.

8. What is one of the purposes of the feeder or branch-circuit disconnecting means?

- A. To reduce electrical shocks**
- B. To allow for manual control of appliances**
- C. To provide overload protection**
- D. To ensure all circuits are offline during maintenance**

The purpose of the feeder or branch-circuit disconnecting means includes the critical function of ensuring that all circuits are safely offline during maintenance. When maintenance or service work is required, it is essential to de-energize the circuits to protect the personnel performing the work. Having a disconnecting means allows for a clear point where the power can be turned off, minimizing the risk of electrical shock or inadvertent energization while work is being performed. This is particularly important in commercial and industrial settings where multiple circuits may be in operation, and the risk of accidents is heightened without a dedicated disconnection method. The other choices, while they touch upon important aspects of electrical safety and control, do not specifically address the role of the disconnecting means during maintenance activities. For example, while reducing electrical shocks and allowing manual control of appliances are important safety elements, they are not the primary function of the disconnecting means outlined in the National Electrical Code (NEC) guidelines regarding maintenance procedures. Therefore, the emphasis on ensuring all circuits are offline during maintenance highlights the justified importance of the disconnecting means in promoting safety practices within electrical systems.

9. Which of the following describes the requirement for conductors in overhead service drops?

- A. They must be insulated**
- B. They must be rated for underground use**
- C. They must be weather-resistant**
- D. They must be compliant with NEC ampacity tables**

The requirement for conductors in overhead service drops is that they must be compliant with NEC ampacity tables. This is essential as ampacity refers to the maximum amount of electric current a conductor or device can carry before sustaining immediate or progressive deterioration. Ensuring that conductors are properly rated for the expected load helps to prevent overheating and potential fire hazards, making adherence to NEC ampacity tables a critical component of electrical safety. The focus on ampacity also encompasses the different factors that can affect the current-carrying capacity of conductors, such as their size, insulation type, ambient temperature, and installation conditions. This thorough consideration of the conductors' capabilities ensures that installations remain within safe operating limits. In the context of overhead service drops, while options like insulation and weather resistance are important for protection against environmental factors, the primary concern remains ensuring the conductors can handle the electrical load effectively, aligning directly with ampacity requirements. This emphasis on load capacity ultimately ensures a safe, functional electrical system.

10. How many conductors can be run in a conduit for a branch circuit?

- A. Only one conductor is allowed**
- B. Up to 5 conductors regardless of size**
- C. Based on size and fill requirements**
- D. Only 2 conductors, regardless of size**

The correct approach to determining how many conductors can be run in a conduit for a branch circuit is based on the size and fill requirements specified in the National Electrical Code (NEC). The NEC provides guidelines to ensure that conduits are not overloaded, which can lead to overheating and potential fire hazards. When determining the maximum number of conductors that can be installed in a conduit, factors such as the size of the conductors, their insulation type, and the diameter of the conduit must be taken into account. The NEC outlines specific fill percentages to ensure that there is enough space within the conduit for heat dissipation and ease of installation. The ampacity of the conductors and the installation conditions are also critical in this assessment. For example, a certain conduit size has a maximum fill capacity that varies depending on the number of conductors and their sizes. If the conductors exceed this fill ratio, it could result in increased heat buildup and exceed the conductor's rated ampacity. By referring to NEC tables and guidelines, one can calculate the permissible loading for any given conductor size in a specific conduit size, ensuring compliance with safety standards while optimizing performance. This methodical approach underscores the importance of understanding both the conductor characteristics and the conduit capacity when designing electrical systems.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://necarticle225.examzify.com>

We wish you the very best on your exam journey. You've got this!