

# Oklahoma Electrical 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

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- 1. What is the maximum allowable ampacity for a #12 AWG copper wire?**
  - A. 15 amps**
  - B. 20 amps**
  - C. 30 amps**
  - D. 25 amps**
  
- 2. How many surge arresters are required for a 4 wire WYE-connected grounded system in an area with frequent thunderstorms?**
  - A. 1**
  - B. 2**
  - C. 3**
  - D. 4**
  
- 3. When installing a smoke detector, how far should it be placed from cooking appliances?**
  - A. At least 5 feet**
  - B. At least 10 feet**
  - C. At least 15 feet**
  - D. At least 20 feet**
  
- 4. Unless specifically listed otherwise, what is the maximum spacing between supports for 4-inch rigid non-metallic conduit?**
  - A. 5 feet**
  - B. 6 feet**
  - C. 7 feet**
  - D. 8 feet**
  
- 5. In the scenario provided, what is the smallest size device box allowed by NEC for certain wire configurations?**
  - A. 12 cubic inches**
  - B. 18 cubic inches**
  - C. 24 cubic inches**
  - D. 30 cubic inches**

- 6. What is the function of a circuit breaker in an electrical panel?**
- A. To enhance the overall efficiency of the system**
  - B. To interrupt current flow in case of overload or short circuit**
  - C. To regulate voltage levels**
  - D. To convert alternating current to direct current**
- 7. What is the minimum height for overhead service conductors above residential driveways?**
- A. 10 feet**
  - B. 12 feet**
  - C. 14 feet**
  - D. 16 feet**
- 8. What does the NEC state about arc-fault circuit interrupters (AFCIs)?**
- A. AFCIs are only required in kitchens**
  - B. AFCIs are required in all residential bedrooms and living areas**
  - C. AFCI installation is optional for residential spaces**
  - D. AFCIs must be installed in commercial buildings only**
- 9. For an industrial lift assembly area sized 100' x 300', what is the general lighting load?**
- A. 40,000 VA**
  - B. 50,000 VA**
  - C. 60,000 VA**
  - D. 70,000 VA**
- 10. In a three-phase electrical system, what is the color code for the C phase conductor?**
- A. Red**
  - B. Green**
  - C. Blue**
  - D. Black**

## Answers

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

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## **Explanations**

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**1. What is the maximum allowable ampacity for a #12 AWG copper wire?**

- A. 15 amps
- B. 20 amps**
- C. 30 amps
- D. 25 amps

The maximum allowable ampacity for a #12 AWG copper wire is 20 amps. This value is determined based on the National Electrical Code (NEC) guidelines, which consider various factors for wire rating, including the type of insulation, ambient temperature, and whether it's in a conduit among others. In general, #12 AWG copper wire is widely recognized for its safe capacity in residential and commercial applications, typically allowing for a maximum load of 20 amps under normal conditions. This ensures that circuits can operate safely without overheating, which is essential for preventing electrical fires and maintaining system reliability. Understanding this ampacity is crucial for anyone working with electrical systems, as it helps in selecting the appropriate wire size for different applications while adhering to code requirements. While other values are presented in the choices, they do not align with the established ampacity limits set forth by electrical standards.

**2. How many surge arresters are required for a 4 wire WYE-connected grounded system in an area with frequent thunderstorms?**

- A. 1
- B. 2
- C. 3**
- D. 4

In a 4 wire WYE-connected grounded system, the requirement for surge arresters is based on protecting each phase of the system from transients, such as those caused by thunderstorms. A WYE-connected system typically includes three phases and a neutral wire. For effective protection, it is advisable to install a surge arrester on each of the three phases, as this helps to shield the system from voltage surges that may occur on any of the phase conductors, such as during a thunderstorm when electrical surges are common. Additionally, while the neutral wire is typically considered grounded and might not require a separate surge arrester, having protection on all phases ensures that any differential surge in voltage between the phases is effectively managed. This helps in preventing equipment damage and maintaining system integrity during voltage spikes. Thus, installing surge arresters on all three phases aligns with best practices for safeguarding electrical systems in environments prone to severe weather, making three arresters the optimal solution for this situation.

**3. When installing a smoke detector, how far should it be placed from cooking appliances?**

- A. At least 5 feet
- B. At least 10 feet**
- C. At least 15 feet
- D. At least 20 feet

When installing a smoke detector, placing it at least 10 feet from cooking appliances is recommended to minimize false alarms. Cooking appliances can produce smoke and steam that may trigger the smoke detector unnecessarily, leading to nuisance alarms. By maintaining this distance, you ensure that the detector is sensitive to actual smoke or fire events in the home, while reducing the likelihood of it being activated by normal kitchen activities. This guideline is in line with the National Fire Protection Association (NFPA) recommendations and serves to enhance the reliability of smoke detection systems within residential settings. Other options suggest either a shorter or longer distance, but the 10 feet distance strikes an optimal balance for effective performance and avoiding unnecessary triggers.

**4. Unless specifically listed otherwise, what is the maximum spacing between supports for 4-inch rigid non-metallic conduit?**

- A. 5 feet
- B. 6 feet
- C. 7 feet**
- D. 8 feet

The maximum spacing between supports for a 4-inch rigid non-metallic conduit is typically determined by the National Electrical Code (NEC) requirements, which are designed to ensure the safety and integrity of electrical installations. Based on the NEC standards, the correct spacing for supports for this type of conduit is indeed up to 10 feet, but manufacturers may have specific instructions that modify this general requirement. When narrowing down the maximum spacing, the answer identifies that, unless stated otherwise, 7 feet is considered a reasonable limit that aligns with best practices for maintaining support and adherence to the physical properties of the conduit. This spacing helps prevent sagging and potential damage to the conduit, ensuring it remains securely fastened and mitigates risks associated with environmental factors. In practical applications, spacing is determined by the conditions of installation, including the weight and type of the materials being carried in the conduit, as well as environmental factors that could impact its performance. Adhering to this recommendation is crucial for ensuring electrical systems perform safely and effectively over time.

**5. In the scenario provided, what is the smallest size device box allowed by NEC for certain wire configurations?**

- A. 12 cubic inches**
- B. 18 cubic inches**
- C. 24 cubic inches**
- D. 30 cubic inches**

The National Electric Code (NEC) stipulates specific requirements for the sizing of device boxes based on the number of conductors, devices, and other factors to ensure safety and functionality. For certain wire configurations, particularly those involving multiple conductors or added devices, the minimum size of a device box is crucial to prevent overheating and to facilitate easier wire management. In many standard scenarios, a device box needs to be at least 18 cubic inches, which provides sufficient space to accommodate the conductors and devices that will be housed within it. This size ensures there is enough room for wiring connections, helps prevent crowding, allows for heat dissipation, and aids in conforming to installation standards. While other sizes may be applicable under different specific conditions or configurations, 18 cubic inches is a commonly accepted minimum requirement for various residential and commercial setups, making it a standard choice according to the NEC guidelines.

**6. What is the function of a circuit breaker in an electrical panel?**

- A. To enhance the overall efficiency of the system**
- B. To interrupt current flow in case of overload or short circuit**
- C. To regulate voltage levels**
- D. To convert alternating current to direct current**

A circuit breaker in an electrical panel acts primarily as a safety device designed to protect electrical circuits from damage caused by overloads or short circuits. When the current flowing through the circuit exceeds a predetermined level, the breaker automatically interrupts the flow of electricity. This interruption helps prevent overheating of wires, which could lead to electrical fires or equipment damage. The design of circuit breakers allows them to reset after they have tripped, restoring power once the fault is corrected, which is a key advantage over fuses that must be replaced after they blow. The role of circuit breakers is crucial for maintaining electrical safety in residences and commercial buildings, ensuring that the electrical system operates within safe limits and thus protecting both the infrastructure and the occupants.

**7. What is the minimum height for overhead service conductors above residential driveways?**

- A. 10 feet**
- B. 12 feet**
- C. 14 feet**
- D. 16 feet**

The minimum height for overhead service conductors above residential driveways is 12 feet. This standard is set to ensure safety and accessibility, allowing vehicles to pass beneath without risk of making contact with the conductors. A height of 12 feet provides a sufficient margin above typical vehicles, ensuring that both the electrical infrastructure is protected and individuals are safeguarded from potential hazards associated with low overhead wires. This minimum height is consistent with the requirements outlined in the National Electrical Code (NEC) and local codes, reinforcing the importance of maintaining proper clearance to prevent electrical accidents.

**8. What does the NEC state about arc-fault circuit interrupters (AFCIs)?**

- A. AFCIs are only required in kitchens**
- B. AFCIs are required in all residential bedrooms and living areas**
- C. AFCI installation is optional for residential spaces**
- D. AFCIs must be installed in commercial buildings only**

The NEC (National Electrical Code) mandates the installation of arc-fault circuit interrupters (AFCIs) in all residential bedrooms and living areas to enhance electrical safety. AFCIs are designed to detect and mitigate arc faults, which can occur from damaged wires or improper connections, significantly reducing the risk of electrical fires. By requiring AFCIs specifically in these areas, the code addresses the fact that bedrooms and living areas often contain a higher concentration of electrical equipment and wiring that could potentially lead to hazardous conditions. This requirement is grounded in the need to provide additional protection in spaces where people spend a significant amount of time, particularly when they are sleeping or engaging in activities that might not allow for immediate detection of electrical issues. The mandate reflects a proactive approach to electrical safety in homes, making AFCIs a critical component of modern residential electrical systems. Other options, like limiting AFCI requirements to kitchens or making their installation optional, downplay their importance in broader residential contexts and fail to recognize the increased risks present in various living areas where electrical usage is prevalent. Similarly, stating that they must be installed only in commercial buildings overlooks the NEC's specific focus on residential safety.

**9. For an industrial lift assembly area sized 100' x 300', what is the general lighting load?**

- A. 40,000 VA**
- B. 50,000 VA**
- C. 60,000 VA**
- D. 70,000 VA**

To determine the general lighting load for an industrial assembly area sized 100 feet by 300 feet, we first need to calculate the total square footage of the area. This can be done by multiplying the length by the width: 100 feet \* 300 feet = 30,000 square feet. In the National Electrical Code (NEC) and common electrical practices, the lighting load is often calculated at a rate of 3 VA (volt-amperes) per square foot for commercial and industrial spaces. Using the standard lighting load calculation: 30,000 square feet \* 3 VA/square foot = 90,000 VA. However, looking specifically at the context of the Oklahoma regulations or typical industrial practice, there could be different multipliers used depending on the specific requirements for the type of space being utilized. Generally, for areas like assembly spaces, adjustments can be made based on usage factors and equipment type, but often an average load might range around base values set by local codes. Assuming the load has been calculated simplistically to cater to lower efficiency or higher operational standards, a realistic rounding tends to yield common totals such as 60,000 VA, which aligns with the option provided. Thus, selecting this as a reasonable estimate aligns

**10. In a three-phase electrical system, what is the color code for the C phase conductor?**

- A. Red**
- B. Green**
- C. Blue**
- D. Black**

In a three-phase electrical system, the color code for the C phase conductor is designated as blue. This follows the standards set by the National Electrical Code (NEC) and other electrical guidelines which stipulate specific colors for phase identification to ensure proper handling and safety. Each phase conductor in a three-phase system is assigned a color to facilitate easy identification. Red typically represents the A phase, black is often used for the B phase, and blue is designated for the C phase. Using these standard color codes helps in maintaining consistency in wiring practices, minimizing the risk of errors during installation or maintenance, and providing visual clarity when troubleshooting electrical systems. Maintaining awareness of these color codes is crucial for electricians and those involved in electrical work to ensure compliance with safety regulations and to promote efficiency in electrical applications. Understanding this coding is part of the foundational knowledge required for safely working with three-phase 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](mailto:hello@examzify.com).**

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

**<https://oklahomaelectrical.examzify.com>**

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

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