

# LADWP Electrical Craft Helper Practice Test (Sample)

## Study Guide



**Everything you need from our exam experts!**

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**SAMPLE**

# Table of Contents

<b>Copyright</b> .....	<b>1</b>
<b>Table of Contents</b> .....	<b>2</b>
<b>Introduction</b> .....	<b>3</b>
<b>How to Use This Guide</b> .....	<b>4</b>
<b>Questions</b> .....	<b>5</b>
<b>Answers</b> .....	<b>8</b>
<b>Explanations</b> .....	<b>10</b>
<b>Next Steps</b> .....	<b>16</b>

# 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. What happens when a permanent magnet is broken into pieces?**
  - A. The pieces lose their magnetism**
  - B. Each piece becomes a separate magnet**
  - C. The magnet becomes larger**
  - D. The pieces form a stronger magnet**
- 2. What is the three-phase power in watts at 240 volts, 20 amperes, and 8% power factor?**
  - A. 4,000 watts**
  - B. 6,643 watts**
  - C. 8,000 watts**
  - D. 10,000 watts**
- 3. What are the six primary methods of producing a voltage?**
  - A. Chemical action, magnetism, friction, heat**
  - B. Heat, light, pressure, electrical discharge**
  - C. Chemical action, magnetism, friction, light**
  - D. Chemical action, pressure, movement, friction**
- 4. What term is often used instead of voltage for electrical pressure?**
  - A. wattage**
  - B. current**
  - C. charge**
  - D. impedance**
- 5. What component in a dry type transformer helps to dissipate heat?**
  - A. Cooling fins**
  - B. A fan**
  - C. Natural convection**
  - D. Water cooling system**

- 6. What type of transformer is typically characterized as having a low fire hazard?**
- A. Oil-filled transformer**
  - B. Dry type transformer**
  - C. Withstand type transformer**
  - D. High voltage transformer**
- 7. What is a primary use of a capacitor in electrical circuits?**
- A. To convert electrical energy into mechanical energy**
  - B. To store and release electrical energy**
  - C. To regulate voltage levels**
  - D. To transform alternating current to direct current**
- 8. Which type of wire is commonly used for residential electrical systems?**
- A. Aluminum wire**
  - B. Iron wire**
  - C. Copper wire**
  - D. Fiber optic wire**
- 9. What kind of ions are formed when atoms lose electrons?**
- A. Neutral ions**
  - B. Positive ions**
  - C. Negative ions**
  - D. Both positive and negative ions**
- 10. What is common to all components of a series circuit?**
- A. Voltage**
  - B. Power**
  - C. Current**
  - D. Resistance**



## **Answers**

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

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## **Explanations**

1. What happens when a permanent magnet is broken into pieces?

- A. The pieces lose their magnetism
- B. Each piece becomes a separate magnet**
- C. The magnet becomes larger
- D. The pieces form a stronger magnet

When a permanent magnet is broken into pieces, each piece retains its magnetic properties and becomes a separate magnet. This occurs because the individual atoms within the magnet remain aligned in such a way that each fragment maintains its own north and south poles. As a result, regardless of the size, each piece exhibits its own magnetic field and can attract or repel other magnetic materials just like the original magnet. The nature of permanent magnets is such that their magnetic domains—regions where the magnetic fields of atoms are aligned—remain intact within each individual fragment. This means that even small pieces of the magnet will still function as independent magnets, each with its own polarity. Thus, if you were to break a cylindrical magnet into several smaller pieces, not only would you have multiple new magnets, but their strength would generally be a fraction of the original magnet's strength, depending on their size.

2. What is the three-phase power in watts at 240 volts, 20 amperes, and 8% power factor?

- A. 4,000 watts
- B. 6,643 watts**
- C. 8,000 watts
- D. 10,000 watts

To calculate the three-phase power in watts, you can use the formula for three-phase power, which is:  $P = \sqrt{3} \times V \times I \times \text{PF}$  Where  $P$  is the power in watts,  $V$  is the voltage,  $I$  is the current in amperes, and  $\text{PF}$  is the power factor. In this scenario, you have a voltage of 240 volts, a current of 20 amperes, and a power factor of 0.08 (which represents the 8% power factor). First, let's plug in the values: 1. Calculate the square root of 3, which is approximately 1.732. 2. Multiply that by the voltage (240 V):  $\sqrt{3} \times 240 = 1.732 \times 240 \approx 415.68$  3. Multiply this result by the current (20 A):  $415.68 \times 20 = 8313.6$  4. Finally, to account for the power factor, multiply by 0.08:  $8313.6 \times 0.08 = 665.09$

### 3. What are the six primary methods of producing a voltage?

- A. Chemical action, magnetism, friction, heat
- B. Heat, light, pressure, electrical discharge
- C. Chemical action, magnetism, friction, light**
- D. Chemical action, pressure, movement, friction

The correct choice identifies the six primary methods of producing voltage through chemical action, magnetism, friction, and light. These methods are fundamental concepts in the field of electricity and physics. Chemical action refers to the process in which a chemical reaction generates a flow of electrons, which is primarily observed in batteries. Magnetism relates to the generation of voltage through electromagnetic induction, where a changing magnetic field generates an electric current in a conductor. Friction involves static electricity created by rubbing two materials together, which can cause a build-up of electrical charge. Light, particularly in photovoltaic cells, can generate voltage when light energy is converted into electrical energy. Understanding these methods provides a comprehensive foundation for grasping the various ways voltage can be produced, which is significant in practical applications and theoretical concepts in electrical engineering and electronics.

### 4. What term is often used instead of voltage for electrical pressure?

- A. wattage**
- B. current
- C. charge
- D. impedance

The term that is often used instead of voltage for electrical pressure is not wattage, but rather voltage itself is commonly referred to as electrical pressure. Voltage represents the potential difference that drives electric current through a circuit, akin to how pressure in a water system drives fluid through pipes. This analogy between pressure and voltage is foundational because it helps explain how electric circuits operate. Wattage refers to the power consumed or produced in a circuit, which is a function of both voltage and current. The relationship is defined by the equation: Power (in watts) = Voltage (in volts) x Current (in amperes). Current denotes the flow of electric charge within a circuit, while charge refers to the fundamental property of matter responsible for electric forces. Impedance, on the other hand, refers to the total opposition (including both resistance and reactance) that a circuit presents to current flow when voltage is applied. Understanding that voltage is analogous to pressure helps in grasping the principles of electric circuits essential for anyone preparing for a career in electrical work or related fields.

**5. What component in a dry type transformer helps to dissipate heat?**

**A. Cooling fins**

**B. A fan**

**C. Natural convection**

**D. Water cooling system**

Natural convection is an important mechanism in dry type transformers for heat dissipation. In these transformers, heat is generated during the process of electrical energy transformation. Natural convection occurs when the warmer air surrounding the transformer rises and is replaced by cooler air, allowing for a continuous cycle of air movement that aids in cooling the unit. In dry type transformers, since they do not use oil or a liquid medium for cooling, they rely on air to remove excess heat. The design of these transformers allows for adequate airflow around the core and windings, facilitating the circulation of air due to temperature differences. This passive form of cooling does not require any mechanical components, making it an effective and reliable option for thermal management in such systems. While the other options like cooling fins, fans, and water cooling systems are all valid forms of heat dissipation methods in different contexts, natural convection is the primary means by which dry type transformers maintain optimal operating temperatures.

**6. What type of transformer is typically characterized as having a low fire hazard?**

**A. Oil-filled transformer**

**B. Dry type transformer**

**C. Withstand type transformer**

**D. High voltage transformer**

A dry type transformer is characterized as having a low fire hazard primarily due to its construction and the materials used. Unlike oil-filled transformers, which use flammable oil for insulation and cooling, dry type transformers rely on solid insulation and air for cooling. This significantly reduces the risk of fire because there is no combustible fluid involved in their operation. The solid insulation materials are generally non-conductive and have high thermal properties, allowing these transformers to operate safely without the risks associated with flammable liquids. As a result, dry type transformers are often preferred in environments where safety is paramount, such as in buildings, schools, and public facilities. Choosing dry type transformers not only mitigates the fire hazard but also enhances maintenance accessibility and environmental safety, making them suitable for various applications within urban settings and areas with strict fire safety regulations.

**7. What is a primary use of a capacitor in electrical circuits?**

- A. To convert electrical energy into mechanical energy**
- B. To store and release electrical energy**
- C. To regulate voltage levels**
- D. To transform alternating current to direct current**

A capacitor's primary function in electrical circuits is to store and release electrical energy, making it integral to a wide range of applications. When a voltage is applied across a capacitor, it accumulates charge on its plates, storing electrical energy in an electric field. This stored energy can be released when necessary, allowing it to smooth out fluctuations in electrical supply, filter signals, or provide quick bursts of energy in various electronic applications. For instance, in power supply circuits, capacitors help maintain steady voltage levels by discharging their stored energy when there are sudden demands. In audio circuits, they are used to filter out unwanted noise by allowing certain frequencies to pass while blocking others. This ability to both store and later discharge energy makes capacitors versatile components in both AC and DC circuits, facilitating various functions without altering energy form as indicated in other options.

**8. Which type of wire is commonly used for residential electrical systems?**

- A. Aluminum wire**
- B. Iron wire**
- C. Copper wire**
- D. Fiber optic wire**

Copper wire is commonly used in residential electrical systems due to its excellent electrical conductivity, durability, and flexibility. Copper has a high resistance to corrosion, ensuring long-lasting performance, which makes it ideal for wiring in homes. Its ability to carry a substantial amount of current without overheating is a critical factor in safe electrical installations. Aluminum wire, while also a conductor of electricity, is less conductive than copper and can be more prone to issues such as thermal expansion, which may lead to loose connections over time. Iron wire is unsuitable for electrical wiring due to its poor conductivity and susceptibility to rust. Fiber optic wire, on the other hand, is designed for data transmission rather than electrical current and is not used in traditional residential electrical systems. Therefore, copper wire stands out as the standard choice for residential wiring, providing a balance of performance and reliability.

## 9. What kind of ions are formed when atoms lose electrons?

- A. Neutral ions
- B. Positive ions**
- C. Negative ions
- D. Both positive and negative ions

When atoms lose electrons, they become positively charged ions, commonly referred to as cations. This occurs because electrons carry a negative charge, and when they are removed from an atom, the overall charge of the atom shifts towards the positive side. For example, if a sodium atom (which has 11 electrons and 11 protons) loses one electron, it will have 11 protons and only 10 electrons, leading to a net charge of +1. This positively charged ion is what is known as a cation. The formation of cations is a fundamental concept in chemistry, particularly in the context of ionic bonding, where positively charged ions attract negatively charged ions to form stable compounds. Understanding this helps clarify why the other choices are not correct: neutral ions imply no charge, negative ions refer to anions formed when electrons are gained, and stating both positive and negative ions does not specifically address the situation of losing electrons. Thus, the formation of positive ions is a direct result of the loss of electrons from an atom.

## 10. What is common to all components of a series circuit?

- A. Voltage
- B. Power
- C. Current**
- D. Resistance

In a series circuit, one of the primary characteristics is that the same current flows through all components. This is due to the nature of a series arrangement where all components are connected end-to-end, forming a single path for the flow of electric charge. When electricity flows through a series circuit, the current has only one route to follow, meaning that every component in that circuit experiences the same amount of current. This consistency in current leads to predictable behavior in the circuit and is fundamental to the operation of series circuits. While voltage can be different across various components (since the total voltage is divided among them), and power and resistance are affected by the amount of current present, it is the current that remains uniform throughout. Understanding this principle is crucial in both practical applications and theoretical analysis of electrical circuits.



## 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://ladwpeleccrafthelper.examzify.com>**

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