

# NATIONAL ELECTRICAL CODE (NEC) ARTICLE 100 PRACTICE TEST (SAMPLE) STUDY GUIDE



## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR  
THE FULL VERSION STUDY GUIDE

<https://necarticle100.examzify.com>



**Copyright © 2026 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 accurate, complete, and timely information about this product from reliable sources.

SAMPLE

# Table of Contents

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

SAMPLE

# 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

SAMPLE

- 1. In ungrounded circuits, what is the voltage measurement taken between a given conductor and any other conductor called?**
  - A. Phase voltage
  - B. Voltage to ground
  - C. System voltage
  - D. Line-to-line voltage
  
- 2. What does it mean if a device is described as "automatic"?**
  - A. It requires manual control for every operation
  - B. It operates by its mechanism when actuated by an influence
  - C. It must be monitored continuously by an operator
  - D. It operates only in specific conditions
  
- 3. What does the term 'raceways' encompass?**
  - A. Only nonmetallic conduits
  - B. Only rigid metal conduit
  - C. A variety of channels for electrical wiring
  - D. Exclusively underground raceways
  
- 4. What is the term for a load where the maximum current is expected to continue for 3 hours or more?**
  - A. Continuous load
  - B. Temporary load
  - C. Intermittent load
  - D. Peak load
  
- 5. What type of switch is intended for isolating an electric circuit from the power source?**
  - A. Switch, General-Use
  - B. Switch, Isolating
  - C. Switch, Isolation Device
  - D. Control switch

**6. What happens when a motor experiences an overload condition?**

- A. The motor will increase in speed
- B. The motor will shut down automatically
- C. The thermal protector activates to prevent damage
- D. The motor will continue to operate without issue

**7. Which device specifically protects a motor against overheating?**

- A. Power inverter
- B. Voltage regulator
- C. Thermal protector
- D. Fuses

**8. What is a switchboard in electrical terms?**

- A. A small panel for home use
- B. An assembly of panels that includes switches and protective devices
- C. A portable device to measure electrical current
- D. A control panel for industrial machinery

**9. What characteristic is essential for ventilated equipment?**

- A. It must be explosion-proof
- B. It should have a cooling system
- C. It must allow circulation of air to remove excess heat
- D. It should be sealed to prevent moisture ingress

**10. What is an outlet that contains one or more receptacles called?**

- A. Plug Outlet
- B. Receptacle Outlet
- C. Power Outlet
- D. Utility Outlet

## **Answers**

SAMPLE

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

SAMPLE

## **Explanations**

SAMPLE

**1. In ungrounded circuits, what is the voltage measurement taken between a given conductor and any other conductor called?**

- A. Phase voltage
- B. Voltage to ground
- C. System voltage
- D. Line-to-line voltage**

*The term that refers to the voltage measurement taken between a given conductor and any other conductor in ungrounded circuits is known as line-to-line voltage. This is particularly relevant in three-phase systems where the voltages between each pair of conductors are important for understanding the operation and safety of the electrical system. Line-to-line voltage provides crucial information about the potential difference between two phases. This distinction is especially significant when determining load characteristics and ensuring proper equipment functionality in three-phase power systems. In contrast, phase voltage typically refers to the voltage measured between a conductor and a neutral or ground reference in a grounded system, while voltage to ground rates the potential from a conductor to ground. System voltage will denote the total operational voltage of a power system but does not specifically indicate the measurement between two conductors. Hence, understanding the specific context of 'line-to-line voltage' is fundamental to accurately navigating electrical measurements in ungrounded circuits.*

**2. What does it mean if a device is described as "automatic"?**

- A. It requires manual control for every operation
- B. It operates by its mechanism when actuated by an influence**
- C. It must be monitored continuously by an operator
- D. It operates only in specific conditions

*When a device is described as "automatic," it implies that the device functions and performs its intended tasks without the need for constant, manual intervention from an operator. This means that the device utilizes its own mechanism to respond to certain influences or stimuli, such as temperature changes, pressure fluctuations, or electrical signals. Automatic devices are designed to independently carry out operations once they are activated, which can involve triggering a sequence of actions based on pre-defined parameters. This ability to self-operate is fundamental to increasing efficiency, reducing the risk of human error, and allowing for enhanced reliability in various applications across electrical systems. The other choices imply the necessity for ongoing manual control, monitoring, or operation under limited conditions, which contradicts the core definition of an automatic device.*

### 3. What does the term 'raceways' encompass?

- A. Only nonmetallic conduits
- B. Only rigid metal conduit
- C. A variety of channels for electrical wiring**
- D. Exclusively underground raceways

*The term 'raceways' encompasses a variety of channels for electrical wiring, which is why this choice is the most accurate. In the context of the National Electrical Code, raceways are defined as any enclosed channel that is intended for holding wires, cables, or busbars. This includes not only conduits made from various materials—such as metallic and nonmetallic—but also cable trays, ducts, and troughs. The versatility of raceways allows them to accommodate different installation needs, providing protection and organization for electrical conductors in various environments. This comprehensive definition highlights their importance in ensuring proper electrical installations and safety. In contrast, the focus on only nonmetallic conduits or rigid metal conduit alone is too narrow; raceways are not limited to these materials. Similarly, restricting the definition to exclusively underground raceways excludes the many above-ground applications and types available. This broad classification ensures that all methods of securing and routing electrical wiring are recognized under the term 'raceways'.*

### 4. What is the term for a load where the maximum current is expected to continue for 3 hours or more?

- A. Continuous load**
- B. Temporary load
- C. Intermittent load
- D. Peak load

*A load characterized by its maximum current being sustained for a duration of 3 hours or more is referred to as a continuous load. This definition aligns with the National Electrical Code (NEC) guidelines, which specify that continuous loads are those that operate at a given load for three hours or longer. Understanding this concept is essential for appropriate electrical system design and safety considerations. Continuous loads are critical for determining proper conductor sizing, overcurrent protection settings, and total load calculations to ensure that a system can handle the sustained current without overheating or failing. When planning electrical systems, professionals must account for continuous loads to comply with NEC requirements and ensure reliable operation. The other terms described in the question do not represent the same characteristics: a temporary load refers to a load that is not intended to operate continuously or for long durations, an intermittent load suggests usage that is not consistent over time with cycles of on and off operation, and a peak load typically refers to the maximum load demand over a short period, not necessarily sustained over hours.*

**5. What type of switch is intended for isolating an electric circuit from the power source?**

- A. Switch, General-Use
- B. Switch, Isolating**
- C. Switch, Isolation Device
- D. Control switch

*The type of switch that is designed specifically for isolating an electric circuit from the power source is known as an isolating switch. This switch plays a crucial role in ensuring the safety of electrical systems by providing a means to disconnect the electrical supply when maintenance or repairs are required. Isolating switches are typically used in situations where it is essential to ensure that a circuit is completely de-energized, allowing maintenance personnel to work safely. They are distinct from general-use switches, which are typically meant for everyday operation of electrical devices, and control switches, which can be used to operate motors or lighting but are not specifically designed for isolation purposes. The term "isolation device" may also imply a broader category, but the specific nomenclature in the context of NEC typically refers to isolating switches. Thus, "Switch, Isolating" is the most accurate choice here, as it directly aligns with the intended function of completely severing electrical connection from the power source when needed.*

**6. What happens when a motor experiences an overload condition?**

- A. The motor will increase in speed
- B. The motor will shut down automatically
- C. The thermal protector activates to prevent damage**
- D. The motor will continue to operate without issue

*When a motor experiences an overload condition, it can lead to excessive current draw, which increases the temperature of the motor windings. The activation of the thermal protector is a critical safety feature designed to prevent damage to the motor. This device senses the elevated temperature and interrupts the power supply to the motor when it reaches a certain threshold. By enforcing this protective measure, the thermal protector helps prevent overheating, degradation of insulation, and ultimately, catastrophic failure of the motor. This protective action is essential because continuing to operate under an overload can cause significant harm to the motor's components, potentially leading to permanent damage. The other options do not accurately represent the typical response of a motor under overload conditions. For instance, a motor would not increase in speed under overload, nor would it automatically shut down without the intervention of a protective device. Lastly, a motor cannot continue to operate without issue during overload; doing so poses serious risks to its performance and longevity.*

## 7. Which device specifically protects a motor against overheating?

- A. Power inverter
- B. Voltage regulator
- C. Thermal protector**
- D. Fuses

*The thermal protector is specifically designed to safeguard a motor against overheating. It functions by monitoring the temperature of the motor windings and automatically disconnecting the electrical supply when the temperature exceeds a predetermined limit. This preventative action is critical because overheating can lead to insulation failure, reduced operational efficiency, and even complete motor burnout. Other devices, while they may serve important roles in electrical systems, do not directly protect against overheating in the same manner. For example, power inverters transform DC electricity to AC, voltage regulators maintain a constant voltage level, and fuses act as overcurrent protection devices by breaking the circuit in the event of excessive current flow. None of these devices provide the specific thermal monitoring and control that a thermal protector does for a motor, highlighting the unique role of the thermal protector in ensuring the longevity and safe operation of motor systems.*

## 8. What is a switchboard in electrical terms?

- A. A small panel for home use
- B. An assembly of panels that includes switches and protective devices**
- C. A portable device to measure electrical current
- D. A control panel for industrial machinery

*A switchboard, in electrical terms, refers to an assembly of panels that includes switches and protective devices. This definition is crucial as switchboards play a significant role in the distribution of electrical power within various applications. They serve as centralized points for controlling and managing the electrical supply, offering the ability to disconnect certain circuits while maintaining power to others. The components typically found in a switchboard may include circuit breakers, fuses, busbars, and various switches that enhance safety and operational efficiency. Understanding the structure and function of a switchboard is essential for proper installation, maintenance, and compliance with electrical codes. In contrast, the descriptions of the other options do not accurately reflect what a switchboard is. A small panel for home use implies a much simpler system that lacks the complexity and functionality of a switchboard. A portable device to measure electrical current describes a multimeter or ammeter, which is entirely different in purpose. Lastly, a control panel for industrial machinery denotes a specific application that may not encompass the broader electrical distribution and control capabilities inherent to a switchboard.*

## 9. What characteristic is essential for ventilated equipment?

- A. It must be explosion-proof
- B. It should have a cooling system
- C. It must allow circulation of air to remove excess heat**
- D. It should be sealed to prevent moisture ingress

*The essential characteristic for ventilated equipment is that it must allow circulation of air to remove excess heat. This is crucial because many types of electrical equipment generate heat during operation. If the heat is not dissipated adequately, it can lead to overheating, which can damage components, reduce efficiency, and potentially lead to failure or hazards such as fire. Effective ventilation enables the movement of air, which helps to carry away the heat produced by the equipment. This ensures that the equipment operates within its designed temperature range, thereby enhancing its performance and longevity. Allowing air circulation is a fundamental principle in the design and operation of many appliances and systems, especially in environments where heat is an unavoidable byproduct of functionality. For equipment that operates under these conditions, proper ventilation is a critical design feature.*

## 10. What is an outlet that contains one or more receptacles called?

- A. Plug Outlet
- B. Receptacle Outlet**
- C. Power Outlet
- D. Utility Outlet

*An outlet that contains one or more receptacles is referred to as a "Receptacle Outlet." This designation is in alignment with the terminology defined in the National Electrical Code (NEC). A receptacle outlet permits the connection of a plug which is designed to provide electrical power to devices and appliances. By specifying "receptacle outlet," the definition emphasizes the function of the outlet as the point where electrical devices can be plugged in, making it clear that it serves as a direct connection point for electrical circuits. The term itself distinguishes it from general terms that might signify other types of outlets. Other choices like "Plug Outlet," "Power Outlet," and "Utility Outlet" do not accurately reflect the terminology used in NEC for an outlet specifically designed with receptacles. Understanding this precise terminology is essential for anyone studying the NEC, as it aids in clear communication and understanding of electrical systems and their components.*

## 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://necarticle100.examzify.com>

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

SAMPLE