

# Michigan Journeyman Practice Test (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 a three-phase system?**
  - A. A type of electrical power distribution that uses three alternating currents**
  - B. A system that uses direct current for power distribution**
  - C. A single-phase distribution system for small buildings**
  - D. A type of transformer used for voltage regulation**
  
- 2. For what purpose are branch circuits used in an elevator system?**
  - A. To provide power for additional safety features**
  - B. To supply power for lighting, ventilation, and heating**
  - C. To distribute power to multiple elevators**
  - D. To monitor electrical consumption**
  
- 3. What is the main benefit of conduit installations?**
  - A. Increased voltage stability**
  - B. Protection of conductors from physical damage**
  - C. Reduction of electrical resistance**
  - D. Easy access for maintenance**
  
- 4. What size wire gauge requires protection by a bushing when entering a box?**
  - A. 2 AWG or larger**
  - B. 3 AWG or larger**
  - C. 4 AWG or larger**
  - D. 5 AWG or larger**
  
- 5. What is the color code for a standard hot wire in residential wiring?**
  - A. Blue or White**
  - B. Green or Yellow**
  - C. Black or Red**
  - D. Brown or Gray**

- 6. What must be installed within 10 feet of an above-ground pool?**
- A. GFCI outlet**
  - B. Grounded receptacle**
  - C. Additional lighting**
  - D. Surge protector**
- 7. What are the minimum dimensions for a concrete encased steel reinforced base electrode?**
- A. 15 inches and 1/4 inch**
  - B. 20 inches and 1/2 inch**
  - C. 24 inches and 3/4 inch**
  - D. 30 inches and 1 inch**
- 8. How far must a receptacle for laundry equipment be located from the intended location?**
- A. 4 feet**
  - B. 6 feet**
  - C. 8 feet**
  - D. 10 feet**
- 9. What is the function of a Ground Fault Circuit Interrupter (GFCI)?**
- A. To regulate voltage levels**
  - B. To prevent overload in circuits**
  - C. To prevent electrical shock by shutting off power**
  - D. To convert AC to DC power**
- 10. What is the main purpose of the National Electrical Code (NEC)?**
- A. To provide electrical design software standards**
  - B. To establish standards for electrical safety**
  - C. To regulate the cost of electrical materials**
  - D. To monitor energy consumption**

## Answers

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

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## **Explanations**

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## 1. What is a three-phase system?

- A. A type of electrical power distribution that uses three alternating currents**
- B. A system that uses direct current for power distribution**
- C. A single-phase distribution system for small buildings**
- D. A type of transformer used for voltage regulation**

A three-phase system is fundamentally defined as a type of electrical power distribution that utilizes three alternating currents, which are generated and delivered at different phases. In a three-phase system, these currents are offset by 120 degrees from each other, which allows for a continuous and balanced power supply that is more efficient than single-phase systems. This configuration enables a smoother operation of electrical motors and other equipment that require more power, making it ideal for industrial applications and large facilities. The three-phase system inherently provides a more consistent and reliable flow of energy, reducing the risk of overloads and fluctuations that can occur in single-phase systems. It allows for the use of smaller conductors as well, because the power transmitted is achieved more efficiently, which can lead to cost savings in materials and installations. This is why three-phase systems are widely used in manufacturing and infrastructure, providing significant advantages over other types of systems.

## 2. For what purpose are branch circuits used in an elevator system?

- A. To provide power for additional safety features**
- B. To supply power for lighting, ventilation, and heating**
- C. To distribute power to multiple elevators**
- D. To monitor electrical consumption**

Branch circuits in an elevator system serve the specific purpose of providing power for lighting, ventilation, and heating within the elevator. This ensures that the elevator cabin is a comfortable environment for passengers, especially in commercial or residential buildings where elevators are frequently used. Proper lighting enhances visibility, making it safer for passengers to enter and exit the elevator, while ventilation and heating contribute to overall comfort, particularly in extreme weather conditions. In contrast, while safety features are crucial for elevators, the primary role of branch circuits is not dedicated to these additional safety systems. Although distributing power to multiple elevators is a function of the larger electrical distribution system, branch circuits themselves are more focused on the specific needs of individual elevator cars. Monitoring electrical consumption, while important for energy management and efficiency, is typically handled by other systems rather than the branch circuits that directly power the elevator functions.

### 3. What is the main benefit of conduit installations?

- A. Increased voltage stability
- B. Protection of conductors from physical damage**
- C. Reduction of electrical resistance
- D. Easy access for maintenance

The primary benefit of conduit installations lies in their ability to protect conductors from physical damage. Conduits serve as a protective tube or channel through which electrical wires are routed, shielding them from environmental factors such as moisture, chemicals, and mechanical impact. This is particularly important in areas where cables may be exposed to hazards, such as in industrial settings or outdoor environments. By enclosing the conductors, conduits also help prevent wear and tear, reducing the risk of short circuits, electrical failures, and ensuring the overall safety and longevity of electrical systems. Other options, such as increased voltage stability or reduction of electrical resistance, do not directly relate to the function of conduits, as these aspects pertain more to the electrical design and specifications rather than the physical protection that conduits provide. Easy access for maintenance is an advantage in certain contexts, but it is secondary to the paramount benefit of safeguarding conductors from potential damage.

### 4. What size wire gauge requires protection by a bushing when entering a box?

- A. 2 AWG or larger
- B. 3 AWG or larger
- C. 4 AWG or larger**
- D. 5 AWG or larger

The requirement for using a bushing when entering a box is primarily focused on the protection of conductors from physical damage and ensuring proper electrical connections. According to the National Electrical Code (NEC), conductors that are larger than 4 AWG must have a bushing at the entry point of a box to protect the insulation from abrasion and to maintain the integrity of the electrical system. The bushing acts as a safeguard that ensures that the sharp edges of the box entry do not compromise the insulation of the wire, which could potentially lead to short circuits or electrical failures. In this context, options related to sizes smaller than 4 AWG do not require such protection, as their insulation is generally considered sufficient to withstand normal wear and tear without additional means of protection. Thus, the focus on 4 AWG or larger wires is crucial for maintaining safety and reliability in electrical installations.

**5. What is the color code for a standard hot wire in residential wiring?**

- A. Blue or White**
- B. Green or Yellow**
- C. Black or Red**
- D. Brown or Gray**

In residential wiring, the standard color code for a hot wire is either black or red. Black is most commonly used for the primary hot wire that carries the electric current to the load, while red can be used as a secondary hot wire, especially in 240-volt circuits or in three-way switch configurations. Understanding this color code is crucial for safety and proper wiring practices because it helps electricians and homeowners identify hot wires, ensuring that they take the necessary precautions to avoid electrical shock or short circuits. This consistent color coding is part of the National Electrical Code (NEC) guidelines, which are adopted in Michigan, making it essential for anyone working with electrical systems to recognize these colors. This knowledge supports electricians in completing installations and repairs safely and efficiently.

**6. What must be installed within 10 feet of an above-ground pool?**

- A. GFCI outlet**
- B. Grounded receptacle**
- C. Additional lighting**
- D. Surge protector**

The correct response to this question is that a grounded receptacle must be installed within 10 feet of an above-ground pool. This installation is crucial for safety reasons, as it allows for the use of electrical devices, such as pool maintenance equipment or lighting, in proximity to the water. A grounded receptacle provides a path for electrical current to safely return to the ground, significantly reducing the risk of electric shock, which can be particularly hazardous around water. In the context of safety regulations and codes, grounding is critical for any electrical installation near bodies of water, as it protects against electrical faults. Code requirements often dictate the use of grounded receptacles in such areas to ensure that any stray electricity is safely diverted. Other options mentioned, while important in their own contexts, do not specifically meet the regulatory requirement for installation near an above-ground pool. For example, while a GFCI outlet enhances safety by cutting off power during a ground fault, it doesn't fulfill the specific requirement for a grounded receptacle. Similarly, additional lighting and surge protectors serve different purposes and do not address the immediate need for a grounded power source nearby. Thus, recognizing the necessity of a grounded receptacle in this scenario ensures compliance with safety codes and contributes to a safer environment around

**7. What are the minimum dimensions for a concrete encased steel reinforced base electrode?**

- A. 15 inches and 1/4 inch**
- B. 20 inches and 1/2 inch**
- C. 24 inches and 3/4 inch**
- D. 30 inches and 1 inch**

The correct minimum dimensions for a concrete encased steel reinforced base electrode are indeed 20 inches wide and 0.5 inch thick. This specification is grounded in electrical codes that aim to ensure safe grounding practices in building construction. A concrete encased electrode plays a critical role in grounding systems, as it provides a low-resistance path to the earth, helping to protect both people and property by reducing the risk of electrical shock and equipment damage. The specified dimensions ensure that the electrode has sufficient surface area and material volume to effectively carry fault currents and maintain an efficient electrical connection with the earth. In grounding scenarios, it's essential to adhere to the minimum size requirements to ensure that the grounding system can handle potential surge currents without compromising safety or functionality. The selected dimensions strike the right balance between physical feasibility and electrical performance, in accordance with industry standards and regulations.

**8. How far must a receptacle for laundry equipment be located from the intended location?**

- A. 4 feet**
- B. 6 feet**
- C. 8 feet**
- D. 10 feet**

The correct distance a receptacle for laundry equipment should be located from the intended installation area is indeed 6 feet. This is established to ensure that the receptacle is safely accessible while adhering to safety codes and minimizing the risk of accidental contact with water sources that are often present in laundry areas. The 6-foot guideline serves several important functions, including preventing electrical hazards that can arise from water exposure and ensuring that cords can reach the receptacle without strain or risk of disconnection. By maintaining this distance, electric shock hazards are effectively reduced, creating a safer environment for users in residential settings. In addition, this distance takes into account typical washing machine and dryer configurations, ensuring that the power supply is conveniently located without being impeded by the close proximity of the appliances. Understanding this guideline is crucial for anyone involved in electrical installation and safety compliance within the home.

**9. What is the function of a Ground Fault Circuit Interrupter (GFCI)?**

- A. To regulate voltage levels**
- B. To prevent overload in circuits**
- C. To prevent electrical shock by shutting off power**
- D. To convert AC to DC power**

A Ground Fault Circuit Interrupter (GFCI) plays a critical role in enhancing electrical safety by monitoring the current flowing through a circuit. Its primary purpose is to quickly disconnect power when it detects an imbalance between the outgoing and incoming current, which can occur when electricity escapes the intended circuit, potentially causing electrical shock. When a ground fault occurs, the GFCI identifies the difference in current and responds almost instantaneously, cutting off the electrical supply. This prevention of electrical shock is particularly vital in areas where the risk of such occurrences is higher, like bathrooms, kitchens, and outdoor settings, where moisture and conductive materials may be present. The other options do not accurately describe the function of a GFCI. Regulating voltage levels pertains to devices like voltage regulators, preventing overload is managed by circuit breakers or fuses, and converting AC to DC power is the role of rectifiers. Thus, the focus of a GFCI is specifically on safety by preventing electrical shock.

**10. What is the main purpose of the National Electrical Code (NEC)?**

- A. To provide electrical design software standards**
- B. To establish standards for electrical safety**
- C. To regulate the cost of electrical materials**
- D. To monitor energy consumption**

The main purpose of the National Electrical Code (NEC) is to establish standards for electrical safety. This comprehensive set of guidelines is designed to ensure that electrical installations are safe for both people and property. It provides minimum safety requirements to reduce the risk of electrical hazards, such as shock, fire, and equipment damage. By creating a uniform standard that can be followed across various jurisdictions, the NEC facilitates safe electrical practices, ensuring consistency and protection in electrical design and installation. While the other options touch on aspects related to electrical work, they do not capture the primary focus of the NEC. For instance, the code does not specify software standards, regulate material costs, or directly monitor energy consumption. Instead, its emphasis is firmly on safety to protect individuals and infrastructure from the dangers associated with 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](mailto:hello@examzify.com).**

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

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

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