

# **WESTERN ELECTRICAL CONTRACTORS ASSOCIATION (WECA) 103 PRACTICE TEST (SAMPLE) STUDY GUIDE**



## **SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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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. Which of the following best states the minimum depth requirement for an outdoor lighting circuit to pass under a paved driveway?**
  - A. 6 inches
  - B. 12 inches
  - C. 18 inches
  - D. 24 inches
- 2. For ceiling-suspended paddle fans heavier than 35 lbs, the marking shall include the maximum weight to be supported.**
  - A. 15 lbs
  - B. 25 lbs
  - C. 45 lbs
  - D. 35 lbs
- 3. Which voltage pair is used to describe the dual-voltage capability of the single-phase pump motors?**
  - A. 120 / 240
  - B. 208 / 230
  - C. 115 / 230
  - D. 230 / 460
- 4. Which rule describes the overcurrent protective device sizing for continuous loads on a 1200 W space heater?**
  - A. 120% rule
  - B. 100% rule
  - C. 125% rule
  - D. 150% rule
- 5. Using 150 VA per 2 ft of track, what is the track lighting demand for a 6 ft length?**
  - A. 300 VA
  - B. 600 VA
  - C. 900 VA
  - D. 750 VA

6. NEC 210.23(A)(1) limits any one cord-connected equipment to what percent of a general purpose branch circuit rating?
- A. 60%
  - B. 70%
  - C. 90%
  - D. 80%
7. Guard strips are required for exposed cables in accessible attics.
- A. True
  - B. False
  - C. Only when cables are near joists
  - D. Only for cables over 1/4 inch
8. For multi-wire branch circuits, the means to simultaneously disconnect all hot conductors is normally provided by which device?
- A. GFCI breaker
  - B. Single-pole breaker with handle tie
  - C. 2-pole circuit-breaker
  - D. Fuse-disconnect
9. In a recessed fixture, the requirement that allows through wiring conductors to pass through the box is the fixture being marked as Identified for Through Wiring.
- A. Identified for Through Wiring
  - B. Through Wiring Not Allowed
  - C. Through Wiring Marked
  - D. Through Wiring Permitted
10. A nameplate on an appliance indicates the rating in \_\_\_\_\_ and amps, or in volts and watts.
- A. model number
  - B. serial number
  - C. rating in volts and amps or volts and watts
  - D. color

## **Answers**

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

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## **Explanations**

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**1. Which of the following best states the minimum depth requirement for an outdoor lighting circuit to pass under a paved driveway?**

- A. 6 inches
- B. 12 inches**
- C. 18 inches
- D. 24 inches

*The key concept is protecting underground electrical wiring that runs under a paved surface. When an outdoor lighting circuit must pass under a driveway, the burial depth is chosen to guard the conductors from physical damage caused by vehicles and maintenance, while still being practical to install. The minimum depth you'll most often see for this scenario is 12 inches. This depth provides enough cover to resist direct impacts and moisture, especially when the conductors are inside conduit to shield them and allow easier future pulling or replacements. Deeper depths, like 18 or 24 inches, are used in heavier-traffic areas or under different conditions, but for a typical driveway installation the 12-inch depth is the standard. A shallower depth would risk damage and noncompliance, while the choices that go deeper than necessary aren't required for this common case.*

**2. For ceiling-suspended paddle fans heavier than 35 lbs, the marking shall include the maximum weight to be supported.**

- A. 15 lbs
- B. 25 lbs
- C. 45 lbs
- D. 35 lbs**

*The key idea is labeling to show the load the mounting can safely carry. When a ceiling suspended paddle fan weighs more than 35 pounds, the fixture must be marked with the maximum weight it's designed to support. That value is 35 pounds, which is why the best answer is 35 pounds. The other numbers don't match the required rating for this scenario: they would imply different support limits that aren't specified by this marking rule.*

**3. Which voltage pair is used to describe the dual-voltage capability of the single-phase pump motors?**

- A. 120 / 240
- B. 208 / 230
- C. 115 / 230**
- D. 230 / 460

*Dual-voltage capability means a single-phase pump motor is designed to run on two voltages by wiring its windings differently. For these motors, the standard dual-voltage designation is 115/230 volts. When fed with 115 V, the windings are connected in parallel so each winding sees 115 V. When fed with 230 V, the windings are wired in series so the total voltage applied is 230 V. This lets the same motor operate from common US supply levels without changing the motor, just adjusting the winding configuration. The other voltage pairings shown are typical for different motor types or services (for example, three-phase motors or different service voltages), but they do not describe the dual-voltage labeling used for these single-phase pump motors.*

**4. Which rule describes the overcurrent protective device sizing for continuous loads on a 1200 W space heater?**

- A. 120% rule
- B. 100% rule
- C. 125% rule**
- D. 150% rule

*Continuous loads, like a space heater that can run for long periods, require the overcurrent protective device to be sized at 125% of the continuous load. This extra margin accounts for heat buildup and ensures the circuit won't nuisance-trip while still protecting the conductors. For a 1200 W heater on a 120 V circuit, the current is 10 A. Multiplying by 1.25 gives 12.5 A, so you'd choose the next standard size up, typically a 15 A breaker. That's why the 125% rule is the correct approach here. The 100% rule would not provide enough allowance for continuous operation, and the 120% or 150% options do not align with NEC practice for continuous loads.*

**5. Using 150 VA per 2 ft of track, what is the track lighting demand for a 6 ft length?**

- A. 300 VA
- B. 600 VA
- C. 900 VA
- D. 750 VA**

*Track lighting load grows in direct proportion to the length of track. The rule is 150 VA for every 2 ft of track, which means 75 VA per foot. For a 6 ft run, multiply 6 ft by 75 VA/ft to get 450 VA. That is the demand the track would impose. The options listed don't include 450 VA, so none match the calculation. If someone instead treated the length in a way that yields 750 VA, that would not align with the stated 150 VA per 2 ft increment.*

**6. NEC 210.23(A)(1) limits any one cord-connected equipment to what percent of a general purpose branch circuit rating?**

- A. 60%
- B. 70%
- C. 90%
- D. 80%**

*On a general-purpose branch circuit, the ampere rating of any one cord-and-plug-connected piece of equipment must not exceed 80% of the branch-circuit rating. This provides a safety margin so that the circuit isn't loaded to its full capacity by a single device, leaving headroom for other plugged-in equipment and reducing the chance of nuisance trips or overheating. For example, a 15-amp circuit is allowed to have a single cord-connected device up to 12 amps ( $0.80 \times 15$  A). A 20-amp circuit would be limited to 16 amps ( $0.80 \times 20$  A). This rule applies to devices plugged into general-use receptacles on the circuit and is separate from other sizing rules that apply to fixed equipment or continuous loads.*

**7. Guard strips are required for exposed cables in accessible attics.**

- A. True
- B. False**
- C. Only when cables are near joists
- D. Only for cables over 1/4 inch

*Guard strips protect conductors from nails or screws by adding protective plates on framing members where cables could be damaged. But they're not required for every exposed attic cable. The rule is that protective plates are needed only when a cable is within 1-1/4 inches of the edge of a framing member or where there's a real risk of damage from fasteners. In an accessible attic, if a cable sits more than 1-1/4 inches from the edge of a joist or stud, no plate is required; if it's closer, a protective plate is needed. So the statement is false because guard strips aren't universally required for exposed attic cables—protection depends on proximity to the edge and potential damage.*

**8. For multi-wire branch circuits, the means to simultaneously disconnect all hot conductors is normally provided by which device?**

- A. GFCI breaker
- B. Single-pole breaker with handle tie
- C. 2-pole circuit-breaker**
- D. Fuse-disconnect

*When a multi-wire branch circuit shares a neutral, both hot conductors must be disconnected together so the neutral isn't left energized and a shock hazard is avoided. A two-pole circuit-breaker provides a true common trip, so if one side trips the other trips automatically, disconnecting both hot conductors in one action. This guarantees simultaneous shutdown and is the standard way to safely service MWBCs. While a pair of single-pole breakers with a handle tie can sometimes achieve the same result, a dedicated two-pole device with a common trip is the normal, more reliable choice. GFCI protection and fuse-disconnects aren't the mechanism that ensures simultaneous disconnection of both hot conductors for MWBCs.*

**9. In a recessed fixture, the requirement that allows through wiring conductors to pass through the box is the fixture being marked as Identified for Through Wiring.**

- A. Identified for Through Wiring**
- B. Through Wiring Not Allowed
- C. Through Wiring Marked
- D. Through Wiring Permitted

*Allowing conductors to pass through a recessed fixture's box is allowed only when the fixture is specifically identified for through wiring. This marking tells you that the fixture's electrical box, clamps, and internal clearances are rated to accommodate wires passing straight through without compromising safety, box fill calculations, or insulation. It ensures the wiring can be routed through the fixture without damaging conductors or creating a hazard. The exact designation used in practice is Identified for Through Wiring, which is why that option is the correct choice. Other phrasings don't reflect the required standardized labeling and don't authorize through wiring in the same way.*

10. A nameplate on an appliance indicates the rating in \_\_\_\_\_ and amps, or in volts and watts.

A. model number

B. serial number

C. rating in volts and amps or volts and watts

D. color

*The key idea here is that a nameplate tells you the electrical requirements of the appliance in terms of how it should be powered. It specifies the voltage and the current it draws, or the voltage and the power it consumes. This information lets you size the circuit and protective devices correctly and, if you know watts and voltage, you can calculate current ( $I = P/V$ ). So you'll see ratings listed as volts plus amps, or volts plus watts, which is exactly what the nameplate communicates. The other options describe identifiers or cosmetic attributes (model number, serial number, color) and don't indicate the electrical requirements.*

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## 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://weca103.examzify.com>

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

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