

CONDUIT LEVEL 1 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. Determine the distance from the left end to the center of the three-bend saddle.
 - A. 44 1/2 inches
 - B. 45 1/2 inches
 - C. 46 inches
 - D. 44 11/16 inches
2. Which option equals 79 1/2 inches?
 - A. 78 5/8"
 - B. 79 1/2"
 - C. 80 3/8"
 - D. 81 3/4"
3. A three-bend saddle is used for small cylindrical and square obstructions.
 - A. True
 - B. False
 - C. Only rectangular obstructions
 - D. Only large diameter pipes
4. What type of test or check can confirm continuity and proper grounding after installation?
 - A. A visual inspection.
 - B. A continuity test for the grounding path and insulation resistance test for insulation integrity.
 - C. A resistance to insulation test only.
 - D. A voltage drop test on all conductors.
5. Which option equals 81 3/4 inches?
 - A. 78 5/8"
 - B. 79 1/2"
 - C. 80 3/8"
 - D. 81 3/4"

- 6. What tool is used to bend conduit at a specific angle?**
- A. A conduit bender
 - B. A hacksaw
 - C. A drill
 - D. A torque wrench
- 7. What is the concept of bend radius in conduit bending to avoid damage?**
- A. Bends should be as sharp as possible.
 - B. Bends can be any radius as long as it fits.
 - C. Bends should use the manufacturer-recommended radius to prevent kinking and insulation damage.
 - D. Bend radius is not related to insulation.
- 8. Which option equals 80 3/8 inches?**
- A. 78 5/8"
 - B. 79 1/2"
 - C. 80 3/8"
 - D. 81 3/4"
- 9. How should you determine the correct conduit size for a given set of conductors?**
- A. Calculate the total conductor fill and select a size that meets or exceeds the fill requirements per NEC guidelines.
 - B. Guess based on the number of wires.
 - C. Choose the largest available size.
 - D. Use the same size as the circuit breaker rating.
- 10. What will be the distance between Mark A and Marks B and C?**
- A. 6 5/8 inches
 - B. 8 1/8 inches
 - C. 8 3/8 inches
 - D. 7 1/2 inches

Answers

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

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Explanations

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1. Determine the distance from the left end to the center of the three-bend saddle.

- A. 44 1/2 inches
- B. 45 1/2 inches
- C. 46 inches
- D. 44 11/16 inches**

Think of locating the center along the saddle's centerline. Because the three-bend saddle is symmetric, the center lies exactly halfway along the centerline from left end to right end. So the distance from the left end to the center is half of the total length along the centerline. To find that total length, add up the straight portions and the contributions from the bends. Each 90-degree bend with radius R contributes an arc length of $(\pi/2) \cdot R$ to the centerline. With three such bends, the bend portions sum to $(3 \cdot \pi/2) \cdot R$. Adding the straight-section lengths shown in the diagram gives the full centerline length. Using the given dimensions in the problem, the total centerline length comes out to 89 1/4 inches. Half of that is 44 11/16 inches, which is why that option is correct.

2. Which option equals 79 1/2 inches?

- A. 78 5/8"
- B. 79 1/2"**
- C. 80 3/8"
- D. 81 3/4"

Reading and comparing mixed numbers in inches means adding the whole inches to the fractional part. Convert each to a common form to see which matches 79 1/2. 78 5/8 equals $78 + 5/8 = 78.625$ inches. 79 1/2 equals $79 + 1/2 = 79.5$ inches. 80 3/8 equals $80 + 3/8 = 80.375$ inches. 81 3/4 equals $81 + 3/4 = 81.75$ inches. 79 1/2 inches is exactly 79.5, so that option matches the target. If you prefer fractions, 79 1/2 is 79 4/8, while the others are 78 5/8, 80 3/8, and 81 6/8—different values.

3. A three-bend saddle is used for small cylindrical and square obstructions.

- A. True**
- B. False
- C. Only rectangular obstructions
- D. Only large diameter pipes

When routing conduit around an obstacle, you use fittings that create a smooth bypass path rather than forcing the conduit to bend sharply at the obstruction. A three-bend saddle does exactly that by wrapping around the obstruction with three bends, letting the conduit arc around small protrusions without pinching or kinking. This design works well for both cylindrical and square (or rectangular) obstructions because the middle bend can cradle the obstacle while the outer bends tie the conduit back into the run. That flexibility is why it's used for small cylindrical and square obstructions. It isn't aimed at large-diameter pipes, which would require a different approach, and it isn't limited to rectangular obstructions since it also accommodates cylindrical ones. So the statement is correct.

4. What type of test or check can confirm continuity and proper grounding after installation?

- A. A visual inspection.
- B. A continuity test for the grounding path and insulation resistance test for insulation integrity.
- C. A resistance to insulation test only.
- D. A voltage drop test on all conductors.**

The important idea here is confirming safety through two linked checks: that the grounding path is continuous and that insulation remains intact. A grounding path continuity test verifies that the protective earth conductor forms a solid, low-resistance path back to the earth, ensuring the equipment will fault to ground properly if something goes wrong. Alongside that, an insulation resistance test checks the insulation around conductors to detect any breakdowns or moisture paths that could cause leakage currents or shocks. Visual inspection alone cannot prove these electrical conditions, and a voltage drop test looks at performance under load rather than proving grounding continuity or insulation integrity. It may reveal issues under certain loads, but it doesn't directly verify the grounding path or insulation health. So, the best approach after installation is to perform a continuity test for the grounding path to ensure a reliable earth connection, together with an insulation resistance test to confirm insulation integrity. This combination gives a clear picture of both safe grounding and proper insulation.

5. Which option equals 81 3/4 inches?

- A. 78 5/8"
- B. 79 1/2"
- C. 80 3/8"
- D. 81 3/4"**

Think of a mixed number as whole inches plus a fractional part. 81 3/4 inches means 81 inches plus 3/4 inch. Since 3/4 is 0.75, the total is 81.75 inches. Convert the other options to decimals to compare: - 78 5/8 equals 78.625 - 79 1/2 equals 79.5 - 80 3/8 equals 80.375 The one that matches 81.75 inches is the option with 81 3/4 inches.

6. What tool is used to bend conduit at a specific angle?

- A. A conduit bender**
- B. A hacksaw
- C. A drill
- D. A torque wrench

When you need to shape conduit to a precise angle, you use a conduit bender. This tool is specifically designed to form bends in electrical conduit, guiding the pipe as you rotate it to reach an exact degree. It often has angle indicators or references so you can hit the target bend without over- or under-bending, keeping the run smooth and properly aligned. The other tools serve different purposes: a hacksaw cuts conduit to length, a drill creates holes, and a torque wrench tightens fasteners to a set torque. None of those will reliably produce a controlled bend in conduit, which is why the conduit bender is the correct choice for this task.

7. What is the concept of bend radius in conduit bending to avoid damage?

- A. Bends should be as sharp as possible.
- B. Bends can be any radius as long as it fits.
- C. Bends should use the manufacturer-recommended radius to prevent kinking and insulation damage.**
- D. Bend radius is not related to insulation.

Bend radius is about how gently you curve the conduit so the wires inside aren't pressed, kinked, or strained during installation and use. When a bend is too tight, the conduit can kink or pinch the insulation, creating sharp edges that wear away insulation, introduce stress on the conductors, and make pulling and future flexing risky. That's why following the manufacturer-recommended radius for your specific conduit size is the best practice. It provides a tested, safe distance that prevents damage while allowing a smooth pull and preserving the integrity of the insulation and conductors. Choosing a radius that's too small or trying to make bends as sharp as possible increases the chance of insulation damage and conductor stress. Bend radius is directly related to protecting insulation and ensuring reliable performance.

8. Which option equals 80 3/8 inches?

- A. 78 5/8"
- B. 79 1/2"
- C. 80 3/8"**
- D. 81 3/4"

The measured value is a mixed number: 80 inches plus 3/8 of an inch. That means the total is $80 + \frac{3}{8}$, which is exactly $80 \frac{3}{8}$ inches. To see this clearly, convert the fraction to a decimal if helpful: $\frac{3}{8} = 0.375$, so the total is 80.375 inches. The other options change either the whole-inch part or the fractional part, giving totals like 78 5/8 (78.625), 79 1/2 (79.5), or 81 3/4 (81.75) inches. So only $80 \frac{3}{8}$ inches matches the required total.

9. How should you determine the correct conduit size for a given set of conductors?

- A. Calculate the total conductor fill and select a size that meets or exceeds the fill requirements per NEC guidelines.**
- B. Guess based on the number of wires.
- C. Choose the largest available size.
- D. Use the same size as the circuit breaker rating.

Sizing conduit is all about fill: you determine how much space the conductors will occupy inside the raceway and pick a conduit that provides enough interior area for them according to the NEC's fill limits. Start by adding up the cross-sectional areas of every conductor that will run in the conduit, including the equipment grounding conductor, using their insulation sizes. Then compare that total to the interior area of a candidate conduit size, applying the NEC allowable fill percentage for that type of conduit. The goal is to choose the smallest conduit size whose usable interior area can accommodate the total conductor area within those fill limits, giving a bit of extra room for pulling and future access. This approach ensures you're respecting code requirements for space inside the conduit rather than relying on intuition or protections that don't reflect physical space. Using the largest available size or matching the conduit to the circuit breaker's rating doesn't address the actual space needs and can lead to unnecessary material or improper fits.

10. What will be the distance between Mark A and Marks B and C?

- A. $6 \frac{5}{8}$ inches
- B. $8 \frac{1}{8}$ inches
- C. $8 \frac{3}{8}$ inches
- D. $7 \frac{1}{2}$ inches**

The distance from Mark A to the line containing Marks B and C is found by dropping a perpendicular from A to that line. That perpendicular is the shortest distance to the line, forming a right triangle with the line BC. In this setup, the height of that right triangle—the perpendicular distance from A to BC—measures $7 \frac{1}{2}$ inches. So the distance is $7 \frac{1}{2}$ inches. The other options would correspond to different segments (like along BC or a non-perpendicular path), not the shortest distance to the line.

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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.

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

<https://conduitlevel1.examzify.com>

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

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