

EPRI RIGGER'S HANDBOOK PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. Eye splice strength reduction is typically what percent?**
 - A. 5-10%
 - B. 25-30%
 - C. 15-20%
 - D. 10-15%
- 2. How many cubic inches are in one cubic foot?**
 - A. 1728
 - B. 12
 - C. 144
 - D. 5184
- 3. Which of the following best describes the effect on nominal strength when rope is bent around sheaves or hooks?**
 - A. Nominal strength is unchanged
 - B. Nominal strength increases
 - C. Nominal strength is reduced
 - D. Rope fails immediately
- 4. What does a 2 short audible signal indicate when the crane is moving?**
 - A. Stop
 - B. Go ahead
 - C. Back up
 - D. Pause
- 5. Deflection of the boom and pendant stretch will increase which of the following?**
 - A. Load (swing) radius
 - B. Lifting height
 - C. Boom length
 - D. Counterweight load

- 6. Eye nuts must be affixed to SAE Grade 5 / ASTM A449 threaded material.**
- A. False
 - B. Not required
 - C. Eye nuts must be affixed to SAE Grade 5 / ASTM A449 threaded material
 - D. True
- 7. Eynuts are threaded fasteners with a what feature?**
- A. Hex Head
 - B. Looped Head
 - C. Square Head
 - D. Slotted Head
- 8. What determines crane capacity?**
- A. Strength of components, machine weight, and stability
 - B. Operator skill only
 - C. Weather conditions only
 - D. Outrigger spread only
- 9. Doubling the radius of a circle increases the circumference by what factor?**
- A. 2x
 - B. 4x
 - C. 1x
 - D. 3x
- 10. How was the boom angle measured?**
- A. Between horizontal and centerline of the boom
 - B. Between vertical and centerline
 - C. From the base
 - D. From the hoist line

Answers

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

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Explanations

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1. Eye splice strength reduction is typically what percent?

- A. 5-10%
- B. 25-30%
- C. 15-20%**
- D. 10-15%

Creating an eye in a rope changes how the fibers carry load. The splice rearranges the strands and introduces a localized area where load paths aren't as direct, increasing friction and creating a region that can't transfer as much force as the straight rope. Because of this, the rope's effective strength is reduced by about 15 to 20 percent when an eye splice is properly made. In practice, you'll typically use 80–85% of the rope's nominal breaking strength for calculations after an eye splice. Exact reductions vary with rope material, construction, diameter, and splice quality, but 15–20% is the standard figure used in rigging.

2. How many cubic inches are in one cubic foot?

- A. 1728**
- B. 12
- C. 144
- D. 5184

Volume scales with the cube of the linear dimensions. A cubic foot has 1 foot on each side, and since 1 foot equals 12 inches, convert to inches in every direction: 12 inches × 12 inches × 12 inches. Multiply to get 1728 cubic inches. The other numbers represent linear or area measurements, not a full cube's volume: 12 is a single dimension, 144 is an area (12 × 12), and 5184 isn't the volume of a 1-foot cube in cubic inches. So the correct result is 1728 cubic inches.

3. Which of the following best describes the effect on nominal strength when rope is bent around sheaves or hooks?

- A. Nominal strength is unchanged
- B. Nominal strength increases
- C. Nominal strength is reduced**
- D. Rope fails immediately

When rope is bent around sheaves or hooks, the load path becomes uneven and the rope experiences bending stresses in addition to the tension. The fibers on the outer side are pulled more and the inner fibers are compressed, creating a concentration of stress that reduces the rope's ability to carry load. This bending damage accumulates with tighter bends or more wraps, so the rope's nominal strength—its rated breaking strength in a straight pull—decreases once it's bent. That's why rigging guidelines specify minimum bend radii and avoid sharp bends to preserve strength.

4. What does a 2 short audible signal indicate when the crane is moving?

- A. Stop
- B. Go ahead**
- C. Back up
- D. Pause

Two short audible signals are a clear go-ahead from the signaler to the crane operator. They indicate that the path is clear and the operator should continue the planned movement in the indicated direction. This pattern serves as a positive instruction to proceed; different signals would be used to stop or pause, so hearing two short signals means keep moving as you were planned. Always stay attentive to the signaler and confirm any changes if hazards arise.

5. Deflection of the boom and pendant stretch will increase which of the following?

- A. Load (swing) radius
- B. Lifting height
- C. Boom length
- D. Counterweight load**

When the boom deflects and the pendant stretches under load, the line of action of the lifting system shifts and the load creates a larger overturning moment about the crane's base. To keep the crane balanced and prevent tipping, the counterweight must provide a greater resisting moment, so the counterweight load increases. The other factors—load swing radius, lifting height, and the physical boom length—don't inherently rise just from deflection and pendant stretch, since they're determined by different aspects of the crane's geometry and operation.

6. Eye nuts must be affixed to SAE Grade 5 / ASTM A449 threaded material.

- A. False
- B. Not required
- C. Eye nuts must be affixed to SAE Grade 5 / ASTM A449 threaded material**
- D. True

The key idea is that the strength of the eye nut's threaded connection is determined by the material it's threaded into. Eye nuts are designed to transfer lift forces through their threads, so the mounting material must provide enough shear and tensile strength to carry the load. SAE Grade 5 and ASTM A449 specify a high-strength threaded material that matches the eye nut's rated capacity. Using that exact grade ensures the thread engagement can safely handle the forces applied during lifting or pulling. If a weaker material or a different standard is used, the threads could yield or strip, leading to failure. That's why the correct statement is that eye nuts must be affixed to SAE Grade 5 / ASTM A449 threaded material. The other options are not correct because they don't convey the necessary material-strength requirement, or they're too vague.

7. Eyenuts are threaded fasteners with a what feature?

- A. Hex Head
- B. Looped Head**
- C. Square Head
- D. Slotted Head

The defining feature of eyenuts is the looped head that forms an eye for rigging. This loop provides a built-in attachment point for hooks, slings, or ropes, making the nut suitable for lifting or securing loads. The threaded portion still screws onto a bolt or stud like a regular nut, but the eye distinguishes it and enables quick rigging connections. The other shapes described—hex head, square head, or slotted head—refer to different drive styles on ordinary nuts or screws and do not provide the lifting eye feature that characterizes eyenuts.

8. What determines crane capacity?

- A. Strength of components, machine weight, and stability**
- B. Operator skill only
- C. Weather conditions only
- D. Outrigger spread only

Crane capacity is determined by what the crane's structure and base can safely handle in a given setup. The key factors are the strength of the crane's components (booms, jib, sheaves, ropes, gears), the overall weight and balance of the machine, and the stability of the setup (how the machine is supported on the ground, including outriggers and counterweights). These elements together set the rated load for a particular configuration. Operator skill affects safe operation and setup, but not the mechanical limit of what the crane can lift. Weather can influence safe lifting and may impose practical reductions in load due to wind or dynamic effects, but the fundamental capacity rating comes from structural strength, weight distribution, and stability. Outrigger spread is part of stability, yet it is not the sole determinant of capacity.

9. Doubling the radius of a circle increases the circumference by what factor?

- A. 2x**
- B. 4x
- C. 1x
- D. 3x

Doubling the radius doubles the circumference because circumference is directly proportional to the radius. With $C = 2\pi r$, if r becomes $2r$, the new circumference is $C' = 2\pi(2r) = 4\pi r$, which is twice the original $C = 2\pi r$. So the factor is 2x. The other options would imply different relationships (quadrupling, staying the same, or tripling) that don't match the direct proportionality between radius and circumference.

10. How was the boom angle measured?

A. Between horizontal and centerline of the boom

B. Between vertical and centerline

C. From the base

D. From the hoist line

Boom angle is defined by the line along the boom's centerline and the horizontal reference. This way of measuring directly tells you how steep the boom is above the ground, which is the information used in load charts and stability calculations. Measuring from the horizontal keeps the angle tied to the boom's actual orientation in space, so when the boom rises or lowers, the angle changes in a consistent and meaningful way for lifting operations. If you tried to describe the angle from vertical, from the base, or from the hoist line, you'd be describing a different orientation or reference that isn't used to express the boom's tilt relative to the horizontal plane.

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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://epririggershandbook.examzify.com>

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

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