

NEIEP 100 ELEVATOR CONSTRUCTION AND SAFETY PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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	15

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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 device must be in working condition in order to use an elevator car sling as a running platform?**
 - A. The governor and safeties
 - B. The limit switch
 - C. The car door interlock
 - D. The brake coil
- 2. The drop of governor to car measurement is taken from which reference point?**
 - A. Centerline of main rails
 - B. Top of hoistway
 - C. Center of car floor
 - D. Bottom of governor
- 3. Which of the following would be drawn as a detail drawing?**
 - A. Motor control relay
 - B. Elevation view
 - C. Plan view
 - D. Job abstract
- 4. Before maintenance on elevator equipment, which procedure ensures energy cannot be re-energized?**
 - A. After removing power completely
 - B. While the mainline is energized
 - C. After locking out and tagging out the mainline
 - D. Never lockout; just loosen belts
- 5. Who is responsible for barricades being kept in place on a job site?**
 - A. Site supervisor
 - B. Only electricians
 - C. Everyone on the job
 - D. The safety officer

- 6. For installing a bearing on a machine with a class #7 fit, which two items are necessary?**
- A. Dry ice and bearing heater
 - B. Lubricant and rag
 - C. Hammer and chisel
 - D. Soldering iron and flux
- 7. In hydraulic elevator systems, what physical feature supports the car when it is not moving?**
- A. A column of oil
 - B. A steel cable
 - C. A hydraulic piston
 - D. A counterweight
- 8. A scaffold must support its own weight plus at least how many times the maximum intended load transmitted to it?**
- A. 2
 - B. 3
 - C. 4
 - D. 5
- 9. Barriers must be installed in the hoistway pit when the hoistway door will be open by more than how many inches?**
- A. Never
 - B. When the door is closed
 - C. When hoistway door will be open more than 5 inches
 - D. Only during testing
- 10. What method should an elevator constructor use to check the well hole depth?**
- A. Using a tape measure
 - B. Bore depth with a drill
 - C. Use a depth gauge
 - D. Drop a weight led line to the bottom and measure the line

Answers

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

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Explanations

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1. What device must be in working condition in order to use an elevator car sling as a running platform?

- A. The governor and safeties**
- B. The limit switch
- C. The car door interlock
- D. The brake coil

Using a car sling as a running platform relies on the elevator's protective systems to control movement and stop it if needed. The governor is the device that keeps the car from speeding up beyond safe limits, and the safeties are the primary backup that will arrest the car if something goes wrong, such as rope slip or an over-speed condition. For a platform that may be moved while you're working, you must have both of these in good working order to ensure controlled, protected operation. Other devices like the limit switch, car door interlock, or brake system serve important safety roles, but they don't provide the same direct, immediate protection for moving a platform as the governor and safeties do.

2. The drop of governor to car measurement is taken from which reference point?

- A. Centerline of main rails**
- B. Top of hoistway
- C. Center of car floor
- D. Bottom of governor

The measurement uses the centerline of the main rails as the reference point. This fixed travel reference plane runs through the centers of the rails and stays constant as the car moves, so the governor's drop to the car is defined against a consistent baseline. Using this line ensures the distance is standardized across different car sizes, counterweight arrangements, and shaft configurations, and it aligns with how the car travels in the hoistway. Measuring from the top of the hoistway would vary with shaft height and install details; from the center of the car floor would shift with floor construction and car design; from the bottom of the governor would depend on the governor's own mounting, not the car's position.

3. Which of the following would be drawn as a detail drawing?

- A. Motor control relay**
- B. Elevation view
- C. Plan view
- D. Job abstract

A detail drawing is used to show all the exact features and dimensions of a single part so it can be manufactured or inspected accurately. A motor control relay is a discrete component, and its detail drawing would specify its overall size, mounting holes, terminal layout, coil voltage, connector types, and other precise features. Elevation and plan views are types of views that show the part from different perspectives in a broader context, not the exact specifics of one component. A job abstract is a summary document, not a drawing. So the motor control relay is best shown with a detail drawing because it requires precise, full specifications for that single part.

4. Before maintenance on elevator equipment, which procedure ensures energy cannot be re-energized?

- A. After removing power completely
- B. While the mainline is energized
- C. After locking out and tagging out the mainline**
- D. Never lockout; just loosen belts

Lockout and tagout of the energy source isolates the equipment and prevents any re-energizing while maintenance is underway. Before starting work, you identify all energy sources, disconnect them, place a lock on the main disconnect, and attach a tag that clearly warns maintenance is in progress. The lock physically bars re-energizing, and the tag communicates that the equipment is not to be powered until the lock is removed by the person who applied it. Simply removing power or leaving the mainline energized offers no real protection, and loosening belts does not prevent an unexpected energization. So, locking out and tagging out the mainline is the procedure that ensures energy cannot be re-energized during maintenance.

5. Who is responsible for barricades being kept in place on a job site?

- A. Site supervisor
- B. Only electricians
- C. Everyone on the job**
- D. The safety officer

Barricades are a safety measure that protects everyone by keeping people out of hazardous areas. Because any worker walking through the site could be exposed to those hazards, the responsibility for keeping barricades in place is shared by all on the job. If you see a barricade knocked down or damaged, you should restore it or report it right away so the area remains protected. While supervisors and the safety officer establish policies and oversee safety, daily maintenance and adherence to barriers is a collective duty—each person helps keep the site safer by not removing or bypassing barriers and by ensuring openings, hazards, and restricted zones stay properly cordoned off.

6. For installing a bearing on a machine with a class #7 fit, which two items are necessary?

- A. Dry ice and bearing heater**
- B. Lubricant and rag
- C. Hammer and chisel
- D. Soldering iron and flux

When a bearing must be installed with a tight, likely interference, fit, you rely on changing the temperature to make the fit possible without damaging parts. Heating the bearing expands its outer race so it can slip over the shaft or into a bore, and cooling with something like dry ice can shrink the mating surface to help seat the bearing precisely. Using a bearing heater for controlled heating plus dry ice for cooling gives you the right amount of expansion and contraction at assembly time, avoiding hammering or forcing the part and reducing the risk of damage. The other options don't provide the needed thermal change for a precise, safe press fit and could cause damage or be ineffective.

7. In hydraulic elevator systems, what physical feature supports the car when it is not moving?

- A. A column of oil**
- B. A steel cable
- C. A hydraulic piston
- D. A counterweight

In a hydraulic elevator, the car is held up when it isn't moving by the column of hydraulic oil in the cylinder and pipes. The oil is an incompressible medium that transmits the weight of the car to the piston, and when the control valve is closed, this oil column is trapped and supports the car's weight, keeping it in place. The hydraulic piston is the moving part that lifts or lowers the car, but the static support comes from the oil column under pressure. A counterweight is used in other elevator types to balance load, not in a hydraulic system, and a steel cable isn't what supports a hydraulic car when stationary.

8. A scaffold must support its own weight plus at least how many times the maximum intended load transmitted to it?

- A. 2
- B. 3
- C. 4**
- D. 5

When evaluating a scaffold, you're looking at the loads it must safely carry, including its own weight and the maximum load that could be placed on it at one time. A safety margin is built in to handle uncertainties like workers moving, tools and materials, and dynamic forces. The required minimum is that the scaffold can support its own weight plus four times the maximum intended load transmitted to it. This fourfold margin helps prevent failure under peak use or unexpected jolts, keeping the structure stable. For example, if the scaffold weighs 500 pounds and the maximum load it will carry at once is 2,000 pounds, the system must be rated to support at least $500 + 4 \times 2000 = 8,500$ pounds. Four is the minimum; a higher multiple would also meet the requirement, but the question asks for the minimum.

9. Barriers must be installed in the hoistway pit when the hoistway door will be open by more than how many inches?

- A. Never
- B. When the door is closed
- C. When hoistway door will be open more than 5 inches**
- D. Only during testing

Opening the hoistway door creates a fall hazard into the shaft, so a barrier must be used to stop someone from stepping into the opening while work is being done. The threshold of more than five inches is used because once the door is open beyond that distance, there's a realistic risk of slipping or reaching into the opening. Installing a barrier at that point provides a physical boundary to protect workers in the pit during maintenance or door checks. If the door is closed or only slightly ajar (five inches or less), the exposure is considered minimal, so the barrier isn't required.

10. What method should an elevator constructor use to check the well hole depth?

- A. Using a tape measure
- B. Bore depth with a drill
- C. Use a depth gauge
- D. Drop a weight led line to the bottom and measure the line**

Lowering a weighted line into the well until the weight reaches the bottom provides a direct, straightforward measurement of depth. The line is marked at known intervals, so when the weight contacts the bottom you simply read the depth from the marks at the surface. This method works in varied conditions, is simple, requires no power tools, and gives an actual measurement of how far down the hole extends. Other methods can be impractical or unreliable in a well: a tape measure can be too short or snag on features, drilling a bore doesn't measure depth, and a depth gauge may require equipment or access that isn't readily available at the bottom. Using a lead or weighted line is the practical, proven way to determine well-hole depth accurately.

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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://neiep100elevator.examzify.com>

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

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