NHI Bridge Inspection Course 130055 Practice Test (Sample)

Study Guide

BY EXAMZIFY

Everything you need from our exam experts!

Sample study guide. For the full version with hundreds of questions, visit: https://nhibridgeinspec130055.examzify.com

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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.

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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!

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Questions

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1. Which data item category includes issues like deck condition, culvert status, and channel alignment?

A. Scour Vulnerability

B. Bearing Status

C. Channel Geometry

D. Bridge Condition

2. Which deck type uses timber planks with wide face of the plank in the vertical position?

A. Plan deck

B. Nail laminated deck

C. Stress laminated

D. Wearing surface

3. Inspect concrete filled-grid steel decks at joints and bridge ends for which condition?

A. Expansion due to corrosion

B. Cracking of the deck

C. Rust staining around fasteners

D. Spalling at the deck surface

4. a member that has been cast as one unit, without joints or seams.

A. Modular

B. Segmented

C. Monolithic

D. Composite

5. Which crack type is bending-induced in concrete?

A. Shear

B. Flexure

C. Tension

D. Compression

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6. Which joint type can consist of two steel plates sliding on top of one another with a maximum movement of 4 inches?

A. Strip seal

B. Compression joint seal

C. Pourable joint seal

D. Assembly joint without seal

7. Which inspection method utilizes chain drags to determine whether concrete decks are sound or delaminated?

A. Physical

B. Visual

C. Advanced

D. Nondestructive

8. Which reinforcement is used for temperature and shrinkage in a concrete deck?

A. Primary reinforcement

B. Secondary reinforcement

C. Positive Moment Tension

D. Negative Moment Tension

9. Which failure mode is most likely in steel grid deck areas under heavy traffic?

A. Broken welds

B. Cracked girders

C. Buckling

D. Weld failures

10. A bridge material that is split and spalled is what material?

A. Concrete

B. Steel

C. Wood

D. Masonry

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Answers

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

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Explanations

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1. Which data item category includes issues like deck condition, culvert status, and channel alignment?

A. Scour Vulnerability

B. Bearing Status

C. Channel Geometry

D. Bridge Condition

The data category that captures the physical state and performance of the bridge itself includes observations like deck condition, culvert status, and channel alignment. Deck condition directly assesses the roadway surface and its structural adequacy for traffic. Culvert status relates to the conduits associated with the bridge and their condition, which affects how the crossing handles water flow. Channel alignment speaks to how the bridge sits in the waterway and whether its alignment could impact hydraulics or load paths; these are all indicators of the overall condition of the bridge and its components, not separate subsystems. Scour Vulnerability focuses on erosion risks around foundations, Bearing Status on the condition of bearings, and Channel Geometry on the physical layout of the channel itself, so they don't fit as well for these items.

2. Which deck type uses timber planks with wide face of the plank in the vertical position?

A. Plan deck

B. Nail laminated deck

C. Stress laminated

D. Wearing surface

Plank orientation is the key idea. In a nail-laminated deck, timber boards are installed on edge so that the wide face of each plank is in a vertical position. This creates a deck composed of narrow slats arranged side by side, with the broad side standing upright. That edge-on attachment is what sets nail-laminated decks apart from others, where boards are laid flat to form a solid horizontal surface (plan deck) or where the deck surface is created by laminated veneers bonded with glue and plates (stress-laminated). The description given—wide face vertical—fits the nail-laminated approach precisely.

3. Inspect concrete filled-grid steel decks at joints and bridge ends for which condition?

A. Expansion due to corrosion

B. Cracking of the deck

C. Rust staining around fasteners

D. Spalling at the deck surface

Expansion due to corrosion is the condition inspectors look for at joints and bridge ends because rust forming inside the steel grid and embedded reinforcement expands as it corrodes. That expansion occurs within the confined concrete of a concrete-filled grid deck, pushing against the surrounding material and causing cracking, spalling, and movement at joints and deck ends. This specific deterioration signal—pressure from rust—directly indicates active degradation that can compromise deck performance, more so than surface signs like staining or isolated cracking that may have other causes. While cracking, rust staining, or surface spalling can occur for various reasons, expansion from corrosion at these locations is the clearest sign of harmful internal deterioration that requires attention.

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4. a member that has been cast as one unit, without joints or seams.

A. Modular

B. Segmented

C. Monolithic

D. Composite

Monolithic means a single, continuous piece formed in one casting, with no joints or seams. That directly matches a member cast as one unit, since there are no joining points or separations. The other terms describe pieces assembled or composed from multiple parts: modular indicates assembled from modules, segmented implies multiple pieces with joints, and composite involves combining materials that typically introduce interfaces. So the description fits best with a monolithic member.

5. Which crack type is bending-induced in concrete?

A. Shear

B. Flexure

C. Tension

D. Compression

When a beam or member is bent, it develops a tension zone on the side opposite the applied load and a compression zone on the other. Concrete handles compression much better than tension, so once the tensile stress in the bottom fibers exceeds the concrete's tensile strength, cracks form there. These bending-induced cracks are called flexural or flexure cracks. They show up on the tension side and are controlled in practice by placing reinforcement to carry the tensile forces. Cracks from shear, direct tension, or pure compression arise from different loading conditions and patterns, so they aren't the bending-induced type.

6. Which joint type can consist of two steel plates sliding on top of one another with a maximum movement of 4 inches?

A. Strip seal

B. Compression joint seal

C. Pourable joint seal

D. Assembly joint without seal

This question is testing which bridge movement joint design allows two steel plates to slide past each other with a relatively large, unobstructed clearance. An assembly joint without seal fits this description best. It is simply two steel plates with a gap between them and no sealing material or bonded filler. Because there's no sealant to compress or deform, the plates can move independently relative to each other, enabling sliding movement up to about four inches. The other joint types—strip seal, compression joint seal, and pourable joint seal—use sealants or filled materials to maintain watertightness and accommodate movement, but that sealing hardware typically constrains how far the plates can slide before the seal would fail or require servicing. So while they allow some expansion and contraction, they aren't designed for the same sliding range as an assembly joint without seal, making the unsupported, unsealed design the correct choice for a 4-inch movement.

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7. Which inspection method utilizes chain drags to determine whether concrete decks are sound or delaminated?

A. Physical

B. Visual

C. Advanced

D. Nondestructive

Chain dragging is a hands-on, physical inspection method. In this approach, the inspector drags a chain across the concrete deck surface and listens for changes in the sound or tone. A solid, intact deck typically produces a clearer, ringing sound, while areas with delamination or voids beneath the surface sound hollow, dull, or distinctively different as the chain moves over them. This method relies on direct tactile and auditory feedback from the material, without needing special instruments or imaging. It's quick, simple, and useful for flagging suspect areas that may require follow-up with more detailed nondestructive testing or deeper assessment. Visual inspection looks for surface cracks or spalling, advanced tools bring in specialized equipment, and nondestructive testing encompasses instrument-based methods; the chain-drag technique fits the plain, physical sounding approach.

8. Which reinforcement is used for temperature and shrinkage in a concrete deck?

A. Primary reinforcement

B. Secondary reinforcement

C. Positive Moment Tension

D. Negative Moment Tension

Temperature and shrinkage cracking happen as concrete cures and dries and as it experiences temperature changes. To control these cracks, engineers use distributed reinforcement known as secondary reinforcement. This type isn't intended to carry the main bending loads; instead it limits crack widths and helps keep the deck durable by spreading stresses from temperature changes and shrinkage. In practice, secondary reinforcement is often a grid of smaller bars or welded wire fabric placed in a layer close to the surface or in both top and bottom layers, depending on the design. Primary reinforcement, by contrast, is sized and spaced to resist the main flexural stresses from loads, not specifically to control shrinkage cracks. The terms positive and negative moment describe where bending tension occurs in a member, not a type of reinforcement. So, for temperature and shrinkage control in a concrete deck, secondary reinforcement is the appropriate choice.

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9. Which failure mode is most likely in steel grid deck areas under heavy traffic?

A. Broken welds

B. Cracked girders

C. Buckling

D. Weld failures

Repeated heavy traffic subjects welded joints in a steel grid deck to many cycles of loading, creating fatigue at the connections. The grid has numerous welds at intersections, and these locations experience high stress concentrations from wheel loads and impact. Over time, tiny cracks begin at the weld toes and grow with each cycle, until the weld can no longer carry the load and breaks. This local failure of welds is more likely than first causing the girders to crack or the entire grid to buckle, because those larger-scale failures require higher or more sustained stresses and are less common under normal heavy-traffic service. So, broken welds at the deck connections are the most probable failure mode under heavy traffic.

10. A bridge material that is split and spalled is what material?

A. Concrete

B. Steel

C. Wood

D. Masonry

Spalling and splitting show up when a material's surface flakes away due to internal stresses from moisture and freeze-thaw cycles. Masonry—brick or stone held together with mortar—is particularly prone because it's porous and relatively brittle. Water in the pores freezes, expands, and pushes apart the surface, causing chunks to detach and the face to crack or split. This creates the characteristic split, spalled appearance on masonry bridge surfaces. While concrete can spall, the classic description of split and spalled surfaces aligns with masonry deterioration, especially in older or weathered bridges.

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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://nhibridgeinspec130055.examzify.com

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

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