NORTH CAROLINA C-WELL EXAM 2 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.

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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. In North Carolina, drinking water quality standards are enforced by which agency?

A. The Environmental Protection Agency

B. The State Department of Health

C. The Department of Agriculture

D. The N.C. Division of Water Resources, PWSS

2. Activated carbon combats taste and odors by which process?

A. adsorbtion

B. oxidation

C. absorbtion

D. chlorination

3. How can you identify if a well is vulnerable to surface water intrusion?

A. Shallow depth, missing or poor sanitary seal, and proximity to surface water or contamination sources.

B. Very deep well depth with robust sanitary seal

C. Well located far from any surface water

D. Use of a check valve

4. Which action is essential for compliance with water quality regulations?

A. Test at the nearest lab

B. Determine a sampling schedule based on the lab's recommendations

C. Count the number of active wells in the system

D. Send all analysis results to the state periodically

5. Which federal act governs drinking water quality nationwide and influences NC well regulations?

A. The Clean Water Act.

B. The Federal Water Pollution Act.

C. The Groundwater Protection Act.

D. The Safe Drinking Water Act (SDWA).

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6. Iron in water can cause:

A. staining of plumbing fixtures

B. staining clothes washed in the water

C. the water have a bad appearance and taste

D. all of the above

7. Which of the following well types is most protected from surface contamination?

A. Artesian well

B. Infiltration gallery

C. Rock well

D. Shallow well

8. Which of the following is the minimum sample size for total coliform analysis?

A. 100 ml

B. 1 ml

C. 10 ml

D. 1 liter

9. Reciprocating positive-displacement pumps are also known as which type?

A. Air-lift pumps

B. Centrifugal pumps

C. Piston pumps

D. Pneumatic ejector

10. The frost line is used as a reference to determine bury depth for water mains; if the frost line is at 18 inches, what is the minimum burial depth required for water mains?

A. 18 inches

B. 24 inches

C. 30 inches

D. 36 inches

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Answers

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

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Explanations

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1. In North Carolina, drinking water quality standards are enforced by which agency?

A. The Environmental Protection Agency

B. The State Department of Health

C. The Department of Agriculture

D. The N.C. Division of Water Resources, PWSS

Enforcement of drinking water quality standards in North Carolina is carried out by the state's Public Water System Supervision program, housed in the N.C. Division of Water Resources. The federal Safe Drinking Water Act sets the overall standards and provides federal oversight, but the day-to-day enforcement—inspections, monitoring, and required corrective actions—is handled by this state program within the Division of Water Resources. In short, NC's PWSS program administers and enforces drinking water standards at the state level.

2. Activated carbon combats taste and odors by which process?

A. adsorbtion

B. oxidation

C. absorbtion

D. chlorination

Taste and odor removal with activated carbon happens mainly through adsorption: odor- and taste-causing molecules cling to the extensive surface area of the carbon and are held on the surface by weak forces. The carbon's porous structure provides countless sites for these molecules to attach, so they're removed from the water or air as it passes through. This is different from absorption, where substances enter the interior of a material, and from processes like oxidation or chlorination, which rely on chemical reactions or adding chemicals. By sticking to the surface, the odor- and flavor-causing compounds are effectively removed, making adsorption the key mechanism here.

3. How can you identify if a well is vulnerable to surface water intrusion?

A. Shallow depth, missing or poor sanitary seal, and proximity to surface water or contamination sources.

B. Very deep well depth with robust sanitary seal

C. Well located far from any surface water

D. Use of a check valve

Vulnerability to surface water intrusion happens when the well is easily exposed to surface conditions. A shallow well depth means the aquifer feeding the well is close to the surface, so infiltrating water from rain, runoff, or nearby surface water can more readily reach the well supply. A missing or poor sanitary seal around the well casing creates an opening for contaminants to move along the annulus into the surrounding ground and groundwater, then into the well. Being located near surface water or contamination sources, such as septic systems or farmland runoff, increases the chances that pollutants reach the groundwater that feeds the well. Taken together, these factors establish direct pathways for contaminants to enter the well. A very deep well with a robust sanitary seal, or a well located far from surface water, lowers risk, while a check valve helps with backflow control but doesn't address the main intrusion pathway from surface water.

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4. Which action is essential for compliance with water quality regulations?

A. Test at the nearest lab

B. Determine a sampling schedule based on the lab's recommendations

C. Count the number of active wells in the system

D. Send all analysis results to the state periodically

Sending all analysis results to the state on a regular schedule is the action that fulfills the reporting requirement regulators rely on. Water quality rules require utilities to monitor for contaminants and to communicate those findings to the appropriate state agency. This reporting creates an official record that the regulator can review to verify that contaminant levels stay within permitted limits, identify trends, and trigger any necessary actions if problems are found. Without this periodic submission, you can test and collect data, but you wouldn't be demonstrating compliance to the regulator or enabling timely oversight. Operational steps like testing at a lab, setting a sampling schedule based on lab guidance, or tallying active wells are important for managing water quality, but they don't by themselves satisfy the legal obligation to report results to the state on the required schedule.

5. Which federal act governs drinking water quality nationwide and influences NC well regulations?

A. The Clean Water Act.

B. The Federal Water Pollution Act.

C. The Groundwater Protection Act.

D. The Safe Drinking Water Act (SDWA).

Drinking water quality nationwide is governed by the Safe Drinking Water Act, which creates the health-based standards that drinking water must meet and establishes the framework states use to regulate public water systems. Under this act, the EPA sets enforceable contaminant limits and oversees compliance, while states like North Carolina implement monitoring, testing, and enforcement to ensure public water systems follow those standards. That nationwide framework is why NC well regulations are influenced by SDWA, since any drinking water supplied through wells that falls under public water system rules must align with these federal requirements. The other options mainly address pollution in surface waters or reflect older or non-federal regulations, and do not establish the nationwide drinking water standards that SDWA provides.

6. Iron in water can cause:

A. staining of plumbing fixtures

B. staining clothes washed in the water

C. the water have a bad appearance and taste

D. all of the above

Iron in water can cause several practical issues: it can leave reddish-brown stains on plumbing fixtures and surfaces, it can stain clothes during washing, and it can give water a muddy appearance with a metallic taste. When iron is present, it tends to oxidize and precipitate, forming particles that cling to surfaces and fabrics. This oxidation also changes the water's color and flavor, especially after the water has been exposed to air or heated. Because these effects can occur together, the option that includes all of them is the best choice.

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7. Which of the following well types is most protected from surface contamination?

A. Artesian well

B. Infiltration gallery

C. Rock well

D. Shallow well

Protection from surface contamination is greatest when the water comes from a confined aquifer tapped by an artesian well. In a confined aquifer, an impermeable layer above traps the water under pressure, and the well is typically sealed within that barrier. This setup means surface contaminants would have to penetrate the confining layer and travel through the aquifer system to reach the water, making contamination entry much harder. The natural hydraulic pressure also often causes the water to rise in the well, reducing the direct exposure of the intake to surface infiltration. By contrast, shallow wells and infiltration galleries draw from near the surface or permeable zones, where contaminants can more easily move down with infiltrating water. Rock wells depend on fractures in the rock, which can serve as straightforward pathways for contaminants from the surface or polluted zones. So the artesian well's confined, pressurized nature provides the best protection against surface contamination.

8. Which of the following is the minimum sample size for total coliform analysis?

A. 100 ml

B. 1 ml

C. 10 ml

D. 1 liter

In total coliform testing, the amount of water you analyze is tied to how the methods are designed and how results are reported. The standard procedures (like membrane filtration or most probable number methods) are validated for a 100 mL sample, and results are interpreted per 100 mL. This volume provides enough organisms to detect contamination without making the test impractical. Using a smaller volume would reduce the chance of catching low-level contamination, leading to falsely low or undetectable results. A larger volume isn't required for routine testing and would just add handling time and complexity without changing the fundamental detection capability for standard methods. Therefore, 100 mL is the minimum typically used.

9. Reciprocating positive-displacement pumps are also known as which type?

A. Air-lift pumps

B. Centrifugal pumps

C. Piston pumps

D. Pneumatic ejector

Reciprocating positive-displacement pumps move a fixed amount of fluid with each back-and-forth stroke of a piston inside a cylinder. That back-and-forth motion, delivering a specific volume per cycle, defines them as piston pumps. The other options don't share this mechanism: air-lift pumps use compressed air to lift water without a fixed-volume displacement per stroke; centrifugal pumps rely on a rotating impeller to impart energy and move fluid, not by a per-stroke displacement; pneumatic ejectors use an air jet to create suction or move fluid rather than a reciprocal piston action.

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10. The frost line is used as a reference to determine bury depth for water mains; if the frost line is at 18 inches, what is the minimum burial depth required for water mains?

A. 18 inches

B. 24 inches

C. 30 inches

D. 36 inches

The main idea is that water mains must be buried below the frost line to avoid freezing and frost heave. The frost line marks how deep ground freezes in your area, so placing the pipe deeper prevents it from freezing and shifting. If the frost line is 18 inches, a common minimum is to add an extra margin—often 12 inches—for protection and durability. That totals 30 inches of burial depth. The other depths aren't as safe or efficient: 18 inches would be within the freezing zone, 24 inches only offers a small cushion below the frost line, and 36 inches is deeper than typically needed for this scenario. So 30 inches is the standard minimum in this context.

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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://northcarolinacwell2.examzify.com

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

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