TEEX Basic Water Works Operations Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

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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

1. On the hardness scale, which range is considered soft water?

A. 61-120 mg/L

B. 0-60 mg/L

C. 121-180 mg/L

D. > 181 mg/L

2. The state requires chemical analysis be kept at least 10 years.

A. True

B. False

C. Not specified

D. Five years

3. Which national regulation ensures uniform safety, quality standards, and lack of contaminants in drinking water?

A. Safe Drinking Water Act of 1974

B. Federal Water Pollution Control Act of 1972

C. Clean Air Act

D. National Environmental Policy Act

4. Water is chemically composed of two atoms of hydrogen and one atom of oxygen.

A. Three atoms of hydrogen and two atoms of oxygen

B. One atom of hydrogen and two atoms of oxygen

C. Two atoms of hydrogen and three atoms of oxygen

D. Two atoms of hydrogen and one atom of oxygen

5. Which item is included in TCEQ required reports?

A. Color of water

B. Daily pumpage

C. Taste of water

D. pH level

6. The sample bottle should be completely filled with sample water.

A. True

B. It should be three quarters full

C. It should be half full

D. False

7. Quality water has low amounts of color, turbidity, solids, and _____.

A. conductivity

B. pH

C. taste and odor

D. color

8. Calcium hypochlorite is made by reacting chlorine with which substance?

A. Lime

B. Water

C. Sand

D. Acid

9. A common filter problem is _____, prevented by proper backwashing.

A. Channeling

B. Mud balls

C. Algae growth

D. Sand buildup

10. Complete the sentence: After contacting chlorine gas, wash in a safety shower or with _____.

A. Garden Hose

B. Soap and Water

C. Dry Towel

D. Work Gloves

Answers

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

Explanations

1. On the hardness scale, which range is considered soft water?

A. 61-120 mg/L

B. 0-60 mg/L

C. 121-180 mg/L

D. > 181 mg/L

Soft water means water with a very low level of dissolved minerals, especially calcium and magnesium. On the hardness scale, hardness is usually expressed in milligrams per liter as calcium carbonate (mg/L as CaCO3). When the total hardness is in the range of 0 to 60 mg/L as CaCO3, the water is considered soft. This low mineral content means less chance of forming scale in pipes and less soap scum, which is why it's classified as soft. Once you go beyond 60 mg/L, the water is categorized into harder ranges: 61-120 mg/L is moderately hard, 121-180 mg/L is hard, and over 180 mg/L is very hard. So the 0-60 mg/L range is the soft water range.

2. The state requires chemical analysis be kept at least 10 years.

A. True

B. False

C. Not specified

D. Five years

The requirement focuses on keeping chemical analysis records for a long period to satisfy regulatory oversight and support ongoing water quality management. Keeping analytical results for at least 10 years ensures there is a complete history to review for compliance with permit conditions, to investigate any anomalies in water quality, and to document treatment effectiveness over time. This long-term retention supports audits, enforcement reviews, and decision-making about treatment processes. In contrast, other records like daily operation logs may have different retention periods, but the rule specifically calls for chemical analysis data to be kept a decade or more.

3. Which national regulation ensures uniform safety, quality standards, and lack of contaminants in drinking water?

A. Safe Drinking Water Act of 1974

B. Federal Water Pollution Control Act of 1972

C. Clean Air Act

D. National Environmental Policy Act

Uniform safety and quality of drinking water across the country are established by the Safe Drinking Water Act. This law gives the EPA the authority to set enforceable standards for drinking water quality, including maximum contaminant levels and required treatment methods, and to oversee state programs so water systems meet those standards. It also requires regular monitoring, public notices, and actions to correct issues, ensuring consumers have access to safe, clean drinking water nationwide. The other acts address pollution of waterways, air quality, or environmental impacts of federal actions, but they do not provide nationwide drinking water standards.

4. Water is chemically composed of two atoms of hydrogen and one atom of oxygen.

A. Three atoms of hydrogen and two atoms of oxygen

B. One atom of hydrogen and two atoms of oxygen

C. Two atoms of hydrogen and three atoms of oxygen

D. Two atoms of hydrogen and one atom of oxygen

Water is made of two hydrogen atoms for every one oxygen atom, so its formula is H2O. In one molecule you'll always have two hydrogens and one oxygen. The description that states two hydrogen atoms and one oxygen atom matches this, since the subscript 2 after hydrogen shows there are two hydrogens, and oxygen has a single atom in the molecule. The other descriptions describe different ratios (like H3O2, HO2, or H2O3) and would not represent water.

5. Which item is included in TCEQ required reports?

A. Color of water

B. Daily pumpage

C. Taste of water

D. pH level

The main idea is that TCEQ-required reports focus on how much water a system produces and delivers, not on aesthetic or taste-related qualities. Daily pumpage is the quantity of water pumped each day, and utilities report this to TCEQ to show demand, help with capacity planning and reservoir balance, and to spot abnormal losses or operational issues. Color of water and taste of water are qualitative quality attributes that aren't part of the standard daily production reports, and pH is a basic water chemistry parameter that is tracked in separate quality testing rather than in the daily pumpage report.

6. The sample bottle should be completely filled with sample water.

A. True

B. It should be three quarters full

C. It should be half full

D. False

In water sampling, you don't fill the bottle to the very top. The fill level is defined by the method and is chosen to keep the sample stable, allow for proper sealing, and prevent spills during transport. A small headspace or a specific fill line helps ensure the bottle can be capped securely and that the sample remains representative and uncontaminated. Because of that, saying the bottle should be completely filled is not correct—you should fill it to the specified volume or line, not to the brim.

7. Quality water has low amounts of color, turbidity, solids, and _____.

A. conductivity

B. pH

C. taste and odor

D. color

The main idea is that good water quality isn't just about chemical measurements; it also means it tastes and smells acceptable. Along with low color, low turbidity, and low total solids, water should have minimal taste and odor issues. Taste and odor are key aspects of aesthetic quality that consumers notice first, so they're the missing element that completes the picture of when water is considered high quality. Conductivity and pH are important chemical parameters, but they aren't described in this same sensory, consumer-acceptance way, and color is already listed, so the best fit is taste and odor.

8. Calcium hypochlorite is made by reacting chlorine with which substance?

A. Lime

B. Water

C. Sand

D. Acid

Calcium hypochlorite is formed when chlorine gas is reacted with lime (calcium hydroxide). The lime provides calcium and an alkaline medium that allows chlorine to oxidize and combine with calcium to make calcium hypochlorite (along with calcium chloride and water in the balanced reaction). Water doesn't supply calcium, sand is inert, and acid would lead to different products, not the calcium hypochlorite needed for disinfection. So the substance that must react with chlorine to form calcium hypochlorite is lime.

9. A common filter problem is _____, prevented by proper backwashing.

A. Channeling

B. Mud balls

C. Algae growth

D. Sand buildup

Backwashing cleans the filter media by removing accumulated solids that clog pores and reduce efficiency. Mud balls are cohesive clumps of sediment and fines that form in the filter bed, choking pore spaces and raising headloss. A proper backwash lifts and fluidizes the bed, then flushes these mud balls out, restoring uniform porosity and filtration effectiveness. While other issues like channeling or algae can affect performance, mud balls are the classic problem that backwashing is designed to prevent.

10. Complete the sentence: After contacting chlorine gas, wash in a safety shower or with _____.

A. Garden Hose

B. Soap and Water

C. Dry Towel

D. Work Gloves

Chlorine gas is a corrosive irritant, so the immediate action is to decontaminate with a strong, sustained wash of clean water to dilute and remove the chemical from skin or eyes. A safety shower is designed to deliver a broad, even flow of water over a large area quickly, which makes it the preferred source for this kind of decontamination. If a safety shower isn't available right away, any adequate water source that can thoroughly rinse the area—such as a garden hose—can be used to remove the chemical. The key is rapid, thorough flushing to reduce exposure, followed by removing contaminated clothing and continuing to rinse for several minutes, then seeking medical attention if symptoms persist.

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://teexbasicwaterworksops.examzify.com

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