

TCEQ CLASS C SURFACE WATER LICENSE PRACTICE EXAM (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. What is turbidity a measure of in treated water?**
 - A. The amount of dissolved solids
 - B. The level of suspended solids
 - C. The presence of biological contaminants
 - D. The overall temperature of the water
- 2. What is the primary reason for chlorinating water before distribution?**
 - A. To remove color
 - B. To reduce odor
 - C. To disinfect and kill harmful microorganisms
 - D. To improve taste
- 3. What community health issue can arise from non-compliance in water treatment?**
 - A. Increased recreational opportunities
 - B. Outbreaks of waterborne diseases and public health crises
 - C. Higher property values in local areas
 - D. Decreased water demand
- 4. What is sedimentation in the context of surface water treatment?**
 - A. The addition of chemicals to disinfect water
 - B. The process in which particles settle out of the water column due to gravity
 - C. The filtration of water through sand and gravel
 - D. The process of adding coagulants to improve water quality
- 5. What can excessive chlorination lead to in water systems?**
 - A. Increased pH levels
 - B. Formation of disinfection byproducts
 - C. Regular maintenance issues
 - D. Decreased water clarity

6. Solids and turbidity in raw water come from urban run-off, stream-bank erosion, agricultural run-off, and _____.
- A. algae
 - B. industry discharge
 - C. treatment sludge
 - D. domestic sewage
7. How often should routine testing for contaminants be performed in surface water systems?
- A. Only when complaints arise
 - B. Once a year
 - C. As specified by TCEQ regulations and facility permits
 - D. Every five years
8. What is the TCEQ preferred method for Cross Connection Control?
- A. Testable Double Check Valve
 - B. Reduced Pressure Zone
 - C. Atmospheric Breaker Valve
 - D. Physical Air Gap
9. What is the main function of chlorination in water treatment?
- A. To enhance taste
 - B. To remove sediments
 - C. To disinfect water from pathogens
 - D. To adjust pH levels
10. What is the primary function of a surface water treatment plant?
- A. To discharge wastewater safely
 - B. To purify surface water to meet drinking water standards
 - C. To store water for agricultural use
 - D. To monitor water quality

Answers

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

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Explanations

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1. What is turbidity a measure of in treated water?

- A. The amount of dissolved solids
- B. The level of suspended solids**
- C. The presence of biological contaminants
- D. The overall temperature of the water

Turbidity is specifically a measure of the clarity of water, which directly relates to the level of suspended solids present. When the water contains a higher concentration of suspended particles, such as silt, clay, algae, and other materials, it becomes cloudier, resulting in increased turbidity. This cloudiness can significantly impact the water quality, affecting light penetration and, consequently, aquatic life. Monitoring turbidity is vital in water treatment processes, as it helps indicate potential issues related to contamination and overall water quality. The other choices do not accurately describe turbidity: dissolved solids are related to water's total dissolved solids level, biological contaminants pertain to microorganisms rather than physical clarity, and temperature influences water's characteristics but is not related to turbidity.

2. What is the primary reason for chlorinating water before distribution?

- A. To remove color
- B. To reduce odor
- C. To disinfect and kill harmful microorganisms**
- D. To improve taste

The primary reason for chlorinating water before distribution is to disinfect and kill harmful microorganisms. Chlorination is an essential water treatment process that targets bacteria, viruses, and other pathogens that could pose health risks to consumers. By effectively eliminating these harmful organisms, chlorination helps ensure that the water supplied to the public is safe to drink and free from waterborne diseases. In addition to disinfection, while chlorination may have some ancillary benefits—including the potential to reduce color, odor, and even improve taste—the main focus and regulatory requirement for chlorination is public health protection through disinfection. This is why the correct answer emphasizes the importance of killing microorganisms, which directly relates to safeguarding community health. Understanding this aspect of water treatment is vital for anyone involved in water distribution, as the safety and quality of drinking water are paramount.

3. What community health issue can arise from non-compliance in water treatment?

- A. Increased recreational opportunities
- B. Outbreaks of waterborne diseases and public health crises**
- C. Higher property values in local areas
- D. Decreased water demand

Non-compliance in water treatment can lead to outbreaks of waterborne diseases and significant public health crises. When water treatment protocols are not followed correctly, harmful microorganisms, pathogens, and contaminants may not be effectively removed from the water supply. This can result in the spread of diseases such as cholera, dysentery, and giardiasis, which can have devastating impacts on community health. Access to clean and safe drinking water is crucial for maintaining public health, and any lapse in treatment can lead to serious illness among the population, particularly vulnerable groups such as children and the elderly. Therefore, the link between non-compliance in water treatment and the potential for public health emergencies highlights the importance of adhering to rigorous water quality standards and regulations.

4. What is sedimentation in the context of surface water treatment?

- A. The addition of chemicals to disinfect water
- B. The process in which particles settle out of the water column due to gravity**
- C. The filtration of water through sand and gravel
- D. The process of adding coagulants to improve water quality

Sedimentation refers to the process in which solid particles suspended in water settle down to the bottom of a container or body of water due to the force of gravity. This process is crucial in surface water treatment, as it helps to separate larger solids and suspended particles from the water before further treatment steps, such as filtration, are applied. During sedimentation, the flow of water is slowed down to allow the particles to settle at the bottom, forming a layer of sludge. This not only clarifies the water but also reduces the load on subsequent treatment processes. Effective sedimentation can significantly enhance the overall efficiency and effectiveness of water treatment systems by minimizing the concentration of particulates that need to be removed, which is essential for producing safe and clean drinking water. While the other options touch on various aspects of water treatment, they do not specifically describe the sedimentation process itself. The addition of chemicals, filtration through sand and gravel, and the use of coagulants are different methodologies employed in water treatment but do not involve the fundamental principle of particles settling due to gravity.

5. What can excessive chlorination lead to in water systems?

- A. Increased pH levels
- B. Formation of disinfection byproducts**
- C. Regular maintenance issues
- D. Decreased water clarity

Excessive chlorination can lead to the formation of disinfection byproducts (DBPs) in water systems. When chlorine reacts with organic matter present in the water, it can produce various harmful compounds, including trihalomethanes (THMs) and haloacetic acids (HAAs). These compounds are known for their potential health risks and regulatory concerns, which make them a significant focus in water treatment processes. Controlling the level of chlorine used in water treatment is crucial not only for effectively disinfecting water but also for minimizing the creation of these disinfection byproducts. Monitoring and adjusting chlorination levels carefully can help maintain water safety and compliance with health standards. This understanding of chlorination and its effects is essential for anyone working in water treatment or management.

6. Solids and turbidity in raw water come from urban run-off, stream-bank erosion, agricultural run-off, and _____.

- A. algae**
- B. industry discharge
- C. treatment sludge
- D. domestic sewage

Algae contribute to solids and turbidity in raw water due to their growth in aquatic environments. When algal blooms occur, they can greatly increase the concentration of solids in the water. As algae die off and decompose, this process leads to additional organic matter in the water, further elevating turbidity levels. Algae can thrive in nutrient-rich waters, and when conditions favor their growth, they can proliferate rapidly, impacting water quality. While other sources of solids and turbidity, such as industrial discharge, treatment sludge, and domestic sewage, can also introduce particulates into water, algae are a natural component of many water bodies that can become problematic under certain environmental conditions. Understanding the role of algae in contributing to turbidity is essential for managing and treating water resources effectively.

7. How often should routine testing for contaminants be performed in surface water systems?

- A. Only when complaints arise
- B. Once a year
- C. As specified by TCEQ regulations and facility permits**
- D. Every five years

Routine testing for contaminants in surface water systems is a critical component of water quality management, ensuring that the water supply is safe and meets regulatory standards. The correct choice emphasizes the necessity of conducting testing as specified by TCEQ regulations and facility permits. This is important because regulations are designed to reflect the unique conditions and potential contaminants of specific water sources, which can vary significantly. Testing frequency specified in regulations and permits typically accounts for factors such as the size of the water system, the population served, historical water quality data, and the potential for contamination. By following these prescribed frequencies, operators can proactively address any emerging water quality issues and ensure compliance with health and safety standards. In contrast, relying on complaints for testing lacks a proactive approach to water safety, while annual or five-year intervals may not adequately respond to variations in water quality that can happen more frequently. Therefore, adherence to TCEQ guidelines ensures a thorough and appropriate monitoring regimen tailored to each surface water system's specific needs.

8. What is the TCEQ preferred method for Cross Connection Control?

- A. Testable Double Check Valve
- B. Reduced Pressure Zone
- C. Atmospheric Breaker Valve
- D. Physical Air Gap**

The preferred method for Cross Connection Control, according to the TCEQ, is the Physical Air Gap. A Physical Air Gap is a vertical separation between the water supply outlet and the flood level of a receiving vessel. This method is highly effective because it provides a complete separation between the potable water supply and any potential contamination source. It is a simple and reliable means of backflow prevention, ensuring that water cannot flow back into the system from any negative pressure or contamination situation. In many cases, the air gap is the most effective and safest method of preventing backflow. By maintaining this physical separation, the risk of contaminants entering the drinking water supply is minimized, adhering to health and safety standards set by regulatory bodies. While other methods may be useful in specific applications, the physical air gap offers the highest level of protection against cross-connection hazards.

9. What is the main function of chlorination in water treatment?

- A. To enhance taste
- B. To remove sediments
- C. To disinfect water from pathogens**
- D. To adjust pH levels

Chlorination plays a critical role in water treatment primarily as a disinfection method. The main function of chlorination is to eliminate or inactivate harmful pathogens such as bacteria, viruses, and protozoa that may be present in the water supply. By introducing chlorine or chlorine compounds into the water, a chemical reaction occurs that effectively destroys these microorganisms, thereby ensuring the water is safe for human consumption. This disinfection process is crucial because pathogens can pose serious health risks, making chlorination an essential step in the treatment of drinking water. In various water treatment facilities, maintaining a residual level of chlorine in the water is also important to provide continued protection against re-contamination as water travels through pipelines to homes and businesses. While chlorination can result in an improvement in taste due to the removal of some organic compounds, enhancing flavor is not its main function. Similarly, it does not remove sediments; this is typically handled by sedimentation and filtration processes prior to chlorination. Additionally, adjusting pH levels is not primarily associated with chlorination; other chemicals or processes are used for pH adjustment, as chlorine does not significantly influence the overall acidity or alkalinity of the water in a controlled manner. Hence, disinfection remains the key purpose of chlorination in

10. What is the primary function of a surface water treatment plant?

- A. To discharge wastewater safely
- B. To purify surface water to meet drinking water standards**
- C. To store water for agricultural use
- D. To monitor water quality

The primary function of a surface water treatment plant is to purify surface water to meet drinking water standards. This involves several processes designed to remove contaminants and pathogens from the water collected from lakes, rivers, or reservoirs. These processes usually include coagulation, flocculation, sedimentation, filtration, and disinfection. Each step is crucial in ensuring that the treated water is safe for human consumption and complies with regulatory standards set forth by health authorities. By concentrating on purification, the plant ensures that pollutants such as organic materials, bacteria, viruses, and chemicals are effectively removed from the water. The ultimate goal is to provide safe drinking water that promotes public health. This is in stark contrast to functions like discharging wastewater, which is primarily concerned with effluent management; storing water for agricultural use, which targets irrigation needs; or monitoring water quality, which is about assessing the safety and cleanliness of water rather than treating it. The focus of a surface water treatment plant is solely on making water safe for drinking, which underscores the importance of option B as the correct choice.

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://tceqclasssurfacewater.examzify.com>

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

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