

NEHA Potable Water Practice Exam (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. What are examples of underground water sources?**
 - A. Rivers and lakes**
 - B. Dug, bored, driven, and drilled wells**
 - C. Clouds and rainfall**
 - D. Public water supplies**
- 2. What role does disinfection play in water treatment?**
 - A. It improves the aesthetic quality of water**
 - B. It eliminates or inactivates harmful microorganisms in water**
 - C. It reduces chemical pollutants**
 - D. It balances the pH levels in water**
- 3. Which chemical is monitored for its potential to accumulate in the bloodstream and cause dysfunction?**
 - A. Mercury**
 - B. Lead**
 - C. Arsenic**
 - D. Copper**
- 4. What are the potential health effects of lead contamination in drinking water?**
 - A. Skin irritations and rashes**
 - B. Neurological damage and developmental issues in children**
 - C. Respiratory problems in adults**
 - D. Gastrointestinal disturbances**
- 5. All of the following are used to disinfect water EXCEPT?**
 - A. Chlorine**
 - B. Bromine**
 - C. Fluorine**
 - D. Iodine**

- 6. In what applications are pressure filters most commonly found?**
- A. Swimming pool filtration**
 - B. Household water treatment**
 - C. Desalination**
 - D. Aquarium systems**
- 7. What is the purpose of flotation in water treatment?**
- A. To enhance the flavor of the water**
 - B. To remove dissolved gases**
 - C. To gather solids and improve surface removal**
 - D. To sterilize the water effectively**
- 8. What is the most powerful disinfectant used in water treatment?**
- A. Chlorine**
 - B. Ultraviolet light**
 - C. Ozone**
 - D. Chloramine**
- 9. Before a drinking water sample is taken, the sampling tap should be clean, free of leaks, and flushed for how long?**
- A. 1 to 1-1/2 minutes**
 - B. 2 to 3 minutes**
 - C. 4 to 5 minutes**
 - D. 6 to 7 minutes**
- 10. For what type of water are slow sand filters particularly effective in removing Giardia?**
- A. High-turbidity water**
 - B. Low-turbidity water**
 - C. Hard water**
 - D. Saline water**

Answers

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

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Explanations

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1. What are examples of underground water sources?

- A. Rivers and lakes
- B. Dug, bored, driven, and drilled wells**
- C. Clouds and rainfall
- D. Public water supplies

Underground water sources are primarily characterized by their location beneath the Earth's surface, where they maintain a consistent supply of water that can be accessed through various methods of extraction. The correct response highlights dug, bored, driven, and drilled wells, which are direct methods of tapping into these subterranean water supplies. These wells are constructed to reach the water table or deeper aquifers, allowing for the extraction of groundwater. Groundwater is a critical resource for drinking water, irrigation, and industrial use, and these types of wells represent significant infrastructure for accessing that essential resource. In contrast, rivers and lakes, while vital sources of surface water, are not classified as underground sources. Similarly, clouds and rainfall pertain to atmospheric water cycles, and public water supplies typically involve treated surface or groundwater sources delivered through a distribution system, rather than being a type of water source themselves. This understanding of the different water source categories helps accentuate why the correct option is focused on the construction and nature of wells.

2. What role does disinfection play in water treatment?

- A. It improves the aesthetic quality of water
- B. It eliminates or inactivates harmful microorganisms in water**
- C. It reduces chemical pollutants
- D. It balances the pH levels in water

Disinfection is a critical step in water treatment because it focuses specifically on the elimination or inactivation of harmful microorganisms that can pose health risks to humans. This process is essential in ensuring that water is safe for consumption, as many pathogens, including bacteria, viruses, and protozoa, can be present in untreated or inadequately treated water sources. Effective disinfection methods, such as chlorination, ultraviolet (UV) treatment, and ozonation, help to kill or deactivate these microorganisms, thereby reducing the likelihood of waterborne diseases. While improving the aesthetic quality of water, reducing chemical pollutants, and balancing pH levels are important aspects of water treatment, they do not directly address the primary purpose of disinfection, which is to safeguard public health by managing microbial contamination. The focus of disinfection is thus on making water microbiologically safe, which is essential for protecting communities from illness.

3. Which chemical is monitored for its potential to accumulate in the bloodstream and cause dysfunction?

- A. Mercury**
- B. Lead**
- C. Arsenic**
- D. Copper**

Lead is monitored for its potential to accumulate in the bloodstream and cause dysfunction because it has well-documented toxic effects on various body systems. Once lead enters the body, it can be stored in bones and teeth, gradually leaching back into the bloodstream, especially during periods of bone turnover, such as pregnancy or aging. This bioaccumulation can lead to a multitude of health issues, particularly affecting the nervous system, kidneys, and cardiovascular system. The health risks associated with lead exposure have led to strict regulations and monitoring programs aimed at minimizing lead levels in drinking water and other environmental sources. Lead exposure is particularly harmful to children, as it can result in developmental delays, learning difficulties, and other serious health problems. While mercury, arsenic, and copper are all toxic and can pose health risks when accumulated in the body, lead's long-standing history of causing significant public health issues and its biological behavior makes it particularly critical to monitor.

4. What are the potential health effects of lead contamination in drinking water?

- A. Skin irritations and rashes**
- B. Neurological damage and developmental issues in children**
- C. Respiratory problems in adults**
- D. Gastrointestinal disturbances**

Lead contamination in drinking water poses significant health risks, particularly affecting the nervous system. In children, exposure to lead can lead to neurological damage, resulting in developmental issues such as learning disabilities, reduced IQ, and behavioral problems. The developing brain and nervous system of children are more vulnerable to the toxic effects of lead, which can disrupt normal growth and brain function. In adults, lead exposure can also have detrimental effects, such as increased blood pressure and potential harm to the cardiovascular system; however, it is the impact on children's development that is particularly concerning and emphasizes the critical need for preventing lead exposure in drinking water sources. Addressing lead contamination is vital for protecting public health, particularly for young children who may be significantly affected by even low levels of lead in their water supply.

5. All of the following are used to disinfect water EXCEPT?

- A. Chlorine**
- B. Bromine**
- C. Fluorine**
- D. Iodine**

Fluorine is not commonly used for disinfecting water. While chlorine, bromine, and iodine are well-established disinfectants used in various drinking water treatment processes, fluorine does not serve this purpose. Chlorine is widely utilized due to its effectiveness in killing bacteria and viruses and providing residual disinfection. Bromine is also used, particularly in certain pool applications and some water treatment situations, offering a less common alternative to chlorine. Iodine, similarly, has been employed in smaller-scale applications, especially in emergency situations or for portable water purification. It is recognized for its disinfectant properties and can effectively kill pathogens. Fluorine, on the other hand, is primarily associated with water fluoridation to prevent dental cavities and is not effective as a disinfectant. The chemical properties of fluorine do not support its use in microbial inactivation, which is the primary goal of water disinfection. Thus, fluorine stands out as the correct answer to this question, as it does not align with the function of water disinfection like the other listed substances do.

6. In what applications are pressure filters most commonly found?

- A. Swimming pool filtration**
- B. Household water treatment**
- C. Desalination**
- D. Aquarium systems**

Pressure filters are most commonly found in swimming pool filtration systems due to the specific requirements of maintaining clean and safe water for recreational use. These filters operate by using a pump to force water through the filter media under pressure, effectively removing contaminants such as dirt, debris, and microorganisms from the water. In swimming pools, the maintenance of water quality is critical for health and safety, as well as for aesthetic reasons. Pressure filters are efficient at handling large volumes of water and can often be cleaned or backwashed to remove collected contaminants, making them a practical choice for the high turnover and maintaining clarity in pool water. While pressure filters can serve other functions, their design and operational characteristics align most closely with the needs of pool filtration systems, where consistent water quality and system reliability are paramount. Other applications may not require the same level of pressure or filtration capability as swimming pools.

7. What is the purpose of flotation in water treatment?

- A. To enhance the flavor of the water**
- B. To remove dissolved gases**
- C. To gather solids and improve surface removal**
- D. To sterilize the water effectively**

Flotation in water treatment plays a crucial role in enhancing the removal of solids from water. This process involves the introduction of small air bubbles into the water, which attach to suspended particles. As these bubbles cling to the solids, they rise to the surface, forming a froth or scum that can be easily removed. This mechanism is particularly effective for separating fine particles that may otherwise remain suspended in the water. It improves the efficiency of solid removal beyond traditional sedimentation methods, allowing for clearer water and better overall treatment performance. This process is typically utilized in various water treatment facilities, especially in the removal of organic matter and other particulates, making it significant in ensuring water meets safety and quality standards prior to distribution or further treatment.

8. What is the most powerful disinfectant used in water treatment?

- A. Chlorine**
- B. Ultraviolet light**
- C. Ozone**
- D. Chloramine**

The most powerful disinfectant used in water treatment is ozone. Ozone is a strong oxidizing agent and has a greater disinfection potential compared to other common disinfectants. It is effective against a wide variety of pathogens, including bacteria, viruses, and protozoa, making it particularly useful in ensuring waterborne pathogens are eliminated effectively. One of the key advantages of ozone is its ability to disrupt the cell walls of microorganisms, leading to their destruction. Additionally, ozone decomposes back into oxygen, leaving no harmful residual chemicals in the treated water, which is beneficial for maintaining water quality. This property also minimizes the formation of disinfection by-products, which can occur with other disinfectants like chlorine and chloramine. Chlorine, while a very effective and commonly used disinfectant, does not have the same level of efficacy as ozone in terms of inactivating certain resistant pathogens. Chloramine, a derivative of chlorine, is also used primarily for its residual effects but is less potent in terms of immediate disinfection capability. Ultraviolet light is an effective method for disinfection as well but relies on direct exposure to be effective and doesn't offer residual protection in the water. Hence, ozone stands out as the most powerful disinfectant specifically used in water treatment

9. Before a drinking water sample is taken, the sampling tap should be clean, free of leaks, and flushed for how long?

A. 1 to 1-1/2 minutes

B. 2 to 3 minutes

C. 4 to 5 minutes

D. 6 to 7 minutes

Flushing the sampling tap for 2 to 3 minutes is considered best practice to ensure a representative sample of the drinking water is collected. This flushing period is important because it helps to clear the tap of any stagnant water that may have been sitting in the plumbing system, which can have different chemical and microbial characteristics compared to the water that is actively supplied to the tap. By allowing the water to run for 2 to 3 minutes, any contaminants that might be present at the outlet due to previous water being held in the pipes are flushed away, thus providing a fresher sample that more accurately reflects the current quality of the water supply. This procedure is essential in obtaining reliable samples that can be analyzed to assess the safety and quality of the drinking water.

10. For what type of water are slow sand filters particularly effective in removing Giardia?

A. High-turbidity water

B. Low-turbidity water

C. Hard water

D. Saline water

Slow sand filters are particularly effective in removing Giardia from low-turbidity water due to their specific design and operational principles. These filters rely on biological processes that develop in the top layer of the sand, forming a microbial community known as a biofilm. This biofilm plays a crucial role in the filtration process as it provides surface area for the attachment and predation of protozoa like Giardia. In low-turbidity water, the presence of fewer suspended particles allows the filters to operate efficiently at their peak potential. The clear water enables the microorganisms within the biofilm to effectively capture and consume pathogens, including Giardia cysts, which may be present in the water. The slow filtration rate facilitates prolonged contact between the water and the biofilm, increasing the likelihood of successfully removing these contaminants. In contrast, high-turbidity water contains a greater concentration of suspended solids that can clog the filter and hinder the biological activity necessary for effective pathogen removal. Hard water and saline water do not relate directly to the effectiveness of slow sand filters on Giardia, as they pertain to water chemistry rather than turbidity levels.

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://nehaportablewater.examzify.com>

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