

OHIO SANITARIAN 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. Which of the following is not considered a satisfactory solution to chemical contamination in well systems?**
 - A. Abandoning the well
 - B. Boiling the water
 - C. Connecting to a public water system
 - D. Building a new, properly constructed, drilled well
- 2. At what exposure level can hydrogen sulfide be fatal?**
 - A. 100 ppm
 - B. 150 ppm
 - C. 225 ppm
 - D. 300 ppm
- 3. Which of the following is NOT a form of alkalinity?**
 - A. Bicarbonate
 - B. Hydroxide
 - C. Carbonate
 - D. Hypochlorite
- 4. Which factor increases the chance of pollution travel?**
 - A. Acidic soil conditions
 - B. Lack of organic materials
 - C. Lack of FE, Mg, C
 - D. All of the above
- 5. Why is a sanitary survey of a water system necessary?**
 - A. To determine the safety and the adequacy of the water supply
 - B. To determine how much iron is in a water supply
 - C. To determine what size pump is needed for the water system
 - D. To determine whether the water in the system is hard or soft
- 6. Why is aluminum monitored in water treatment processes?**
 - A. It enhances flavor
 - B. It is a disinfectant
 - C. It indicates equipment corrosion
 - D. It measures filtration efficiency

- 7. Which method is used to control the growth of algae and protozoa in water?**
- A. Addition of copper sulfate
 - B. Aeration of the water
 - C. Addition of nitrates
 - D. Filtration
- 8. What is a common indicator of unsanitary drinking water?**
- A. Presence of dissolved solids
 - B. Coliform organisms
 - C. High pH levels
 - D. Excess mineral content
- 9. Which soil type has the greatest percentage of porosity?**
- A. Silt
 - B. Uniform sand
 - C. Gravel
 - D. Sandstone
- 10. Which of the following is a major regulatory requirement included in the Safe Drinking Water Act?**
- A. Sampling
 - B. Record keeping
 - C. Public information
 - D. A and B

Answers

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

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Explanations

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1. Which of the following is not considered a satisfactory solution to chemical contamination in well systems?

- A. Abandoning the well
- B. Boiling the water**
- C. Connecting to a public water system
- D. Building a new, properly constructed, drilled well

Boiling water is often used as a method to eliminate biological contaminants such as bacteria and viruses; however, it is not effective for addressing chemical contamination. Chemicals that may compromise water quality, such as heavy metals, pesticides, or industrial solvents, do not get removed or neutralized by boiling. In fact, boiling can sometimes concentrate certain chemical contaminants by evaporating the water, leading to an increase in the chemical concentration in the remaining liquid. Therefore, while boiling might make water microbiologically safe, it does not resolve issues related to chemical contaminants, making it an unsatisfactory solution in this context. On the other hand, solutions such as abandoning the well can eliminate the risk of contamination altogether, connecting to a public water system provides access to a treated and regulated water supply, and building a new well ensures that it meets current construction standards and is less likely to be contaminated, making these options more effective responses to chemical contamination in well systems.

2. At what exposure level can hydrogen sulfide be fatal?

- A. 100 ppm
- B. 150 ppm
- C. 225 ppm
- D. 300 ppm**

Hydrogen sulfide (H₂S) is a toxic gas known for its characteristic smell of rotten eggs and can pose significant health risks, especially at higher concentrations. The correct exposure level at which hydrogen sulfide can be fatal is 300 ppm. At this concentration, the gas can lead to rapid loss of consciousness and respiratory failure, often resulting in death if immediate measures are not taken. It's important to note that lower concentrations of hydrogen sulfide can still be harmful and produce symptoms like irritation of the eyes, nose, and throat, along with pulmonary effects. For example, exposure at levels around 100 ppm can cause discomfort and respiratory irritation, while levels of 150 ppm can lead to more severe symptoms and potential loss of consciousness after only a few minutes. However, 300 ppm represents a critical threshold where fatalities can occur quickly without intervention, emphasizing the importance of protective measures and monitoring in environments where hydrogen sulfide may be present.

3. Which of the following is NOT a form of alkalinity?

- A. Bicarbonate
- B. Hydroxide**
- C. Carbonate
- D. Hypochlorite

The correct answer identifies hypochlorite as not being a form of alkalinity. Alkalinity in water refers to the capacity of water to neutralize acids, and it primarily arises from certain ions that can react with hydrogen ions (H^+). Common forms of alkalinity include bicarbonate, hydroxide, and carbonate, all of which contribute to the buffering capacity of water. Bicarbonate ions can consume hydrogen ions, therefore increasing the alkalinity. Hydroxide ions also raise the pH by providing a basic condition in water. Carbonate ions further increase the alkalinity through similar reactions. In contrast, hypochlorite is a chemical compound commonly used as a disinfectant and bleaching agent, which does not directly participate in the same alkalinity reactions as the other ions. It does not serve to neutralize acids in the same manner and is not classified as a contributor to alkalinity in water chemistry. This distinction makes hypochlorite the option that does not align with the definition of forms of alkalinity.

4. Which factor increases the chance of pollution travel?

- A. Acidic soil conditions
- B. Lack of organic materials
- C. Lack of FE, Mg, C
- D. All of the above**

The correct answer highlights that all the listed factors can contribute to an increased chance of pollution travel. Each of these elements affects the soil's ability to retain or filter pollutants. Acidic soil conditions can lead to the leaching of soil nutrients and contaminants. When the pH of the soil is low, heavy metals and other pollutants are more soluble, allowing them to migrate more easily through the soil and into groundwater or surface water. This emphasizes the importance of pH in soil management practices. The presence of organic materials also plays a crucial role in soil health. Organic matter helps to bind soil particles together, enhancing soil structure and increasing water retention. When organic material is lacking, soil tends to be more erodible and less effective at holding onto pollutants, which can facilitate their spread. Elements like iron (Fe), magnesium (Mg), and carbon (C) are essential for various biochemical processes in soil. A deficiency in these elements can lead to less biological activity, which reduces the soil's ability to degrade or immobilize pollutants. For example, microorganisms that break down contaminants rely on these nutrients to thrive. Without adequate levels of these elements, pollution can move more freely through the soil. Thus, the combination of acidic conditions, the absence of organic materials

5. Why is a sanitary survey of a water system necessary?

- A. To determine the safety and the adequacy of the water supply**
- B. To determine how much iron is in a water supply
- C. To determine what size pump is needed for the water system
- D. To determine whether the water in the system is hard or soft

A sanitary survey of a water system is essential primarily because it assesses the safety and adequacy of the water supply. This comprehensive evaluation involves examining the water source, treatment processes, distribution systems, and any potential contamination risks. By identifying any possible sources of pollution and evaluating the overall infrastructure, a sanitary survey ensures that the water meets health standards and is safe for public consumption. In contrast to the other choices, a sanitary survey is broader in focus than simply measuring specific contaminants like iron, determining pump size, or assessing water hardness. While those aspects can be part of a more detailed examination, the primary goal remains the overall safety and reliability of the water supply, making option A the most comprehensive and relevant choice.

6. Why is aluminum monitored in water treatment processes?

- A. It enhances flavor
- B. It is a disinfectant
- C. It indicates equipment corrosion
- D. It measures filtration efficiency**

Monitoring aluminum in water treatment processes is primarily concerned with its role as an indicator of filtration efficiency. When aluminum compounds are used in water treatment, they serve as coagulants, helping to aggregate and remove impurities and particulates from water. The presence of aluminum in the treated water can signal whether the filtration system is functioning effectively. If high levels of aluminum are detected in the treated water, it may indicate that the filtration system is not adequately removing residual coagulants, which could compromise water quality. Therefore, monitoring aluminum helps ensure that the filtration processes are working correctly and that the water meets safety standards for consumption. While aluminum can play roles in other aspects of water treatment, such as acting in certain ways to enhance sedimentation, its primary significance in monitoring relates to its ability to indicate the performance of the filtration system.

7. Which method is used to control the growth of algae and protozoa in water?

- A. Addition of copper sulfate
- B. Aeration of the water
- C. Addition of nitrates
- D. Filtration**

The most effective method for controlling the growth of algae and protozoa in water is through the addition of copper sulfate. Copper sulfate acts as an algicide, inhibiting the biological processes within algae, thereby effectively reducing their populations in aquatic environments. This method is widely used in various water bodies, including drinking water reservoirs, fish ponds, and lakes, where the control of these organisms is necessary to maintain water quality and ecosystem balance. Filtration can help in removing some particulate matter, including dead algae and protozoa, but it does not actively control or prevent their growth in the first place. Similarly, aeration can improve water quality by increasing oxygen levels, which supports aerobic microorganisms and can potentially outcompete algae, but it doesn't directly manage the population of algae or protozoa. The addition of nitrates may inadvertently encourage more algae growth as they are nutrients that can fuel algae blooms, rather than control them.

8. What is a common indicator of unsanitary drinking water?

- A. Presence of dissolved solids
- B. Coliform organisms**
- C. High pH levels
- D. Excess mineral content

The presence of coliform organisms is a common indicator of unsanitary drinking water because these bacteria are found in the environment, particularly in the feces of warm-blooded animals. Their presence suggests that the water may be contaminated with pathogens that can cause serious health issues, such as gastrointestinal illness. The detection of coliforms, especially *E. coli*, in drinking water signals that there could be a breach in the water's treatment system or contamination from sewage or animal waste, making it unsafe for consumption. While dissolved solids, high pH levels, and excess mineral content can affect water quality, they do not directly indicate microbial contamination. Therefore, testing for coliform organisms is critical for assessing the microbiological safety of drinking water.

9. Which soil type has the greatest percentage of porosity?

- A. Silt
- B. Uniform sand
- C. Gravel**
- D. Sandstone

The correct answer is gravel, as gravel typically has a high percentage of porosity compared to the other soil types listed. Porosity refers to the volume of pore spaces within a given volume of soil that can hold water or air. Gravel is comprised of larger particles, which create larger spaces between the particles, leading to a higher porosity. This characteristic allows for a greater capacity to store water and provides good drainage, making it suitable for various applications, including construction and drainage systems. In contrast, other materials like silt, uniform sand, and sandstone have different particle sizes and arrangements that affect their porosity. Silt has smaller particles and thus, while it holds some water, it has less pore space than gravel. Uniform sand has a more consistent particle size that contributes to less porosity compared to gravel. Sandstone, being a consolidated rock made up of sand grains, has significantly reduced porosity since the grains are cemented together, minimizing the available pore space. Therefore, the structure and particle size of gravel make it the soil type with the greatest porosity among the options provided.

10. Which of the following is a major regulatory requirement included in the Safe Drinking Water Act?

- A. Sampling
- B. Record keeping
- C. Public information**
- D. A and B

The Safe Drinking Water Act (SDWA) encompasses several critical regulatory requirements aimed at ensuring the safety and quality of drinking water in the United States. Public information is a significant aspect of the SDWA, as it mandates that water systems provide consumers with essential information about the quality of their drinking water. This includes data on contaminant levels, health risks, and compliance with safety standards. The statute emphasizes transparency and accountability, thereby allowing the public to make informed decisions regarding their drinking water. While sampling and record-keeping are important components of water quality management and monitoring, the most prominent and specific requirement under the SDWA is the obligation to communicate information to the public. This public disclosure is crucial for maintaining community awareness and trust in water safety, highlighting the importance of the SDWA in protecting public health through informed consumer access to water quality information.

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:

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

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