

OHIO SANITARIAN PRACTICE EXAM (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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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. Typically, an abundant supply of groundwater may be yielded from which type of rocks?**
 - A. Sedimentary rocks
 - B. Molten rocks
 - C. Igneous rock
 - D. Metamorphic rocks
- 2. What does the Maximum Contaminant Level (MCL) represent?**
 - A. The lowest concentration of a contaminant
 - B. The highest concentration of a contaminant allowable in a water system
 - C. A median concentration of contaminants in water
 - D. The average contamination level over a sampling period
- 3. What is another name for Epsom salts?**
 - A. Sodium sulfate
 - B. Calcium sulfate
 - C. Zinc sulfate
 - D. Magnesium sulfate
- 4. If three consecutive water samples from one supply all show the presence of E.coli, what does this indicate?**
 - A. The supply was possibly exposed to human fecal contamination
 - B. The samples were probably collected in dirty bottles
 - C. The sample bottles may have had sodium thiosulfate in them
 - D. The lab technician stuck his thumb in the samples
- 5. What does the presence of ammonia in water typically indicate?**
 - A. Fresh pollution
 - B. Chemical contamination
 - C. Safe drinking levels
 - D. Excess nutrients

- 6. Which of the following is not a commonly accepted method to prevent back-siphonage?**
- A. vacuum breakers
 - B. cross-connections
 - C. air gap separation
 - D. back pressure units
- 7. What term describes microscopic photosynthetic plants that cause taste and odor issues in water?**
- A. Yeasts
 - B. Algae
 - C. Protozoa
 - D. Rotifer
- 8. What has the greatest potential for reducing the demand for water?**
- A. Better conservation practices in homes
 - B. Development of recycling plants by industry
 - C. Better use of technology in agricultural irrigation
 - D. More use of home sewage disposal units
- 9. When using surface waters for drinking water supplies, what is a general rule regarding their treatment?**
- A. They must be considered contaminated
 - B. Fluorides must be used
 - C. They require softening
 - D. Aeration is usually required
- 10. What does aeration in water treatment aim to increase?**
- A. Temperature of the water
 - B. The contact between air and water
 - C. Organic materials in the water
 - D. The speed of water flow

Answers

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

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Explanations

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1. Typically, an abundant supply of groundwater may be yielded from which type of rocks?

A. Sedimentary rocks

B. Molten rocks

C. Igneous rock

D. Metamorphic rocks

Sedimentary rocks are particularly effective at yielding abundant supplies of groundwater due to their porous and permeable nature. These rocks are formed through the accumulation of sediments, which can include particles such as sand, silt, and clay. The spaces between these particles create pores that can store water, allowing groundwater to flow through them with relative ease. In contrast, igneous and metamorphic rocks tend to be less effective in storing and transmitting groundwater. Igneous rocks, which are formed from cooled magma, are often very dense and lack the necessary porosity. Similarly, metamorphic rocks, which have been transformed under heat and pressure, also tend to be compact and impermeable, making them poor aquifers. Molten rocks, while not a standard geological classification in this context, typically refer to magma, which does not hold any groundwater at all as it is in a liquid state. Understanding these properties is crucial for effective groundwater management and resource planning, as sedimentary rocks often serve as significant aquifers in many regions.

2. What does the Maximum Contaminant Level (MCL) represent?

A. The lowest concentration of a contaminant

B. The highest concentration of a contaminant allowable in a water system

C. A median concentration of contaminants in water

D. The average contamination level over a sampling period

The Maximum Contaminant Level (MCL) specifically represents the highest concentration of a contaminant that is permissible in a drinking water supply according to regulatory standards. This value is established to protect public health by ensuring that water systems do not allow contaminant levels that could pose a risk to individuals consuming the water. The MCL is based on scientific research and is designed to safeguard against various health hazards that might arise from exposure to these contaminants over time. Thus, choice B correctly identifies the MCL as a threshold meant to prevent excessive exposure to harmful substances in water, thereby promoting safety and health for the public.

3. What is another name for Epsom salts?

A. Sodium sulfate

B. Calcium sulfate

C. Zinc sulfate

D. Magnesium sulfate

Epsom salts are commonly known as magnesium sulfate. This compound consists of magnesium, sulfur, and oxygen and is typically used in various applications, including health and wellness practices, gardening, and baths due to its therapeutic properties. The name "Epsom salts" derives from the bitter saline water found at Epsom in Surrey, England, which contained high levels of magnesium sulfate. Understanding the composition helps clarify why magnesium sulfate is widely recognized and utilized. Its role as a source of magnesium, an essential mineral for many physiological functions in the human body, makes it particularly noteworthy in dietary supplements and natural remedies. Additionally, its applications in agriculture for soil enhancement further emphasize its versatility. The other names listed in the question refer to different sulfate compounds, which do not share the same properties or uses as magnesium sulfate.

4. If three consecutive water samples from one supply all show the presence of E.coli, what does this indicate?

- A. The supply was possibly exposed to human fecal contamination**
- B. The samples were probably collected in dirty bottles
- C. The sample bottles may have had sodium thiosulfate in them
- D. The lab technician stuck his thumb in the samples

The presence of E. coli in three consecutive water samples indicates a significant risk of contamination, particularly from human fecal matter. E. coli is a type of bacteria commonly found in the intestines of humans and warm-blooded animals, and its detection in drinking water supplies strongly suggests that there has been a breach in the water source's integrity, granting access to pathogens typically associated with fecal pollution. This can occur due to various factors, such as failures in wastewater treatment systems, agricultural runoff, or contamination from septic systems. Reliable water quality monitoring typically flags repeated instances of E. coli as a critical public health concern. The continuity of detecting E. coli across three samples strengthens the evidence of ongoing contamination rather than a sporadic or isolated incident. It necessitates swift evaluation and remedial actions to safeguard public health—such as identifying the source of contamination and implementing water treatment or source protection measures.

5. What does the presence of ammonia in water typically indicate?

- A. Fresh pollution**
- B. Chemical contamination
- C. Safe drinking levels
- D. Excess nutrients

The presence of ammonia in water is commonly associated with fresh pollution, particularly from organic waste or agricultural runoff. When organic matter decomposes, it releases ammonia as a byproduct. This decomposition process often occurs in environments that experience recent contamination, such as wastewater discharges, manure runoff, or leaky septic systems. Thus, detecting ammonia can serve as an indicator of recent pollution events, reflecting the potential impact of human activities or environmental changes on water quality. Other choices present factors that might not accurately reflect the immediate implications of ammonia presence in water. While ammonia can be a form of chemical contamination, it is specifically tied to fresh pollution scenarios due to its occurrence shortly after waste introduction. Similarly, ammonia levels do not indicate safe drinking levels, as high concentrations can be toxic to humans and aquatic life. Finally, while excess nutrients in water can lead to increased ammonia levels, they are not the direct or immediate cause of the ammonia's presence. Therefore, connecting ammonia specifically to fresh pollution provides the most accurate understanding of its significance in water quality assessments.

6. Which of the following is not a commonly accepted method to prevent back-siphonage?

- A. vacuum breakers
- B. cross-connections**
- C. air gap separation
- D. back pressure units

Back-siphonage is a situation where contaminated water is drawn back into the potable water supply due to a drop in pressure. To prevent this occurrence, specific methods are utilized that create barriers to backflow. Among the methods typically accepted are vacuum breakers, which allow air into the system during negative pressure situations, and air gap separation, which physically separates potable water from potentially contaminated sources by a vertical distance. Back pressure units also serve to prevent backflow by ensuring that water pressure in the system remains higher than the pressure from potential contaminants. Cross-connections, on the other hand, are actual points in a plumbing system where the potable and non-potable water supplies are interconnected. Cross-connections are not methods of prevention; rather, they create a risk for back-siphonage by providing a pathway for contaminants to enter the clean water supply. Therefore, they do not align with the goal of preventing back-siphonage, making them the correct choice for this question.

7. What term describes microscopic photosynthetic plants that cause taste and odor issues in water?

- A. Yeasts
- B. Algae**
- C. Protozoa
- D. Rotifer

The term that describes microscopic photosynthetic plants causing taste and odor issues in water is "algae." Algae are a diverse group of aquatic organisms that can perform photosynthesis, converting sunlight into energy. Certain types of algae can proliferate rapidly in water bodies, particularly when nutrients like nitrogen and phosphorus are abundant. This overgrowth, often referred to as algal blooms, can lead to the release of various metabolites, which can produce unpleasant tastes and odors in drinking water supplies. The presence of specific species, such as blue-green algae (cyanobacteria), can also produce toxins that not only affect taste and odor but can pose serious health risks to humans and animals. Understanding the role of algae in water quality is essential for sanitarians and water treatment professionals as they work to ensure safe and palatable drinking water.

8. What has the greatest potential for reducing the demand for water?

- A. Better conservation practices in homes
- B. Development of recycling plants by industry
- C. Better use of technology in agricultural irrigation**
- D. More use of home sewage disposal units

The choice emphasizing better use of technology in agricultural irrigation is particularly significant because agriculture accounts for a large portion of freshwater use globally, often exceeding 70% in many regions. By improving irrigation techniques, such as adopting drip irrigation systems or precision watering, it becomes possible to significantly reduce water waste and enhance water efficiency. This approach allows for more targeted application of water, improving crop yields with less water usage, which can help alleviate the pressure on freshwater resources. In contrast, while conservation practices in homes, recycling plants in industry, and home sewage disposal units do contribute to overall water management, their potential for water demand reduction is generally less impactful than advancing agricultural technology. Home conservation practices can reduce usage, but the scale is limited compared to large-scale agricultural water use. Industrial recycling plants are important for managing industrial water use, but they may not address the primary agricultural water consumption issues. Home sewage disposal units, while necessary for sanitation, do not directly contribute to reducing water demand in significant ways. Thus, enhanced agricultural irrigation technology stands out as the most effective method for achieving a substantial reduction in overall water demand.

9. When using surface waters for drinking water supplies, what is a general rule regarding their treatment?

- A. They must be considered contaminated**
- B. Fluorides must be used
- C. They require softening
- D. Aeration is usually required

Surface waters, such as rivers, lakes, and reservoirs, are subject to contamination from various sources, including agricultural runoff, industrial discharges, and urban pollution. Because they are exposed to the environment and can come into contact with numerous pollutants, a general rule is to assume that these waters are contaminated until proven otherwise. This perspective informs the treatment processes that must be implemented to ensure the water is safe for human consumption. By considering surface waters as contaminated, water treatment facilities are required to engage in thorough testing and rigorous treatment procedures, such as filtration, disinfection, and sometimes chemical treatment, to remove or neutralize potential contaminants and pathogens. This foundational principle emphasizes the necessity of treating surface waters with caution, prioritizing public health and safety. Fluorides, softening processes, and aeration may be part of specific treatment protocols but are not universally required for all surface waters. Each of these methods has specific applications depending on the particular characteristics and intended uses of the water being treated. However, the primary consideration remains that surface waters should be regarded as potentially contaminated to guide appropriate treatment measures effectively.

10. What does aeration in water treatment aim to increase?

- A. Temperature of the water
- B. The contact between air and water**
- C. Organic materials in the water
- D. The speed of water flow

Aeration in water treatment primarily aims to increase the contact between air and water. This process facilitates the exchange of gases, allowing for the removal of dissolved gases such as carbon dioxide and hydrogen sulfide. It also helps in enhancing the oxygen levels in the water, which is essential for the survival of aerobic microorganisms that play a crucial role in the breakdown of organic pollutants. Moreover, improved oxygenation promotes oxidation reactions that can help in the removal of certain contaminants. When aeration is effectively performed, it leads to improved water quality, especially by elevating the biological processes taking place in the treatment system. This is particularly important in processes like activated sludge systems, where the microbial health is directly dependent on adequate aeration for efficient organic matter decomposition. Thus, the significance of increasing the contact between air and water through aeration cannot be overstated in achieving effective water treatment outcomes.

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://ohiosanitarian.examzify.com>

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

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