

PUBLIC HEALTH SANITARIAN PRACTICE TEST (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 term describes the process used to determine the concentration of an acid in a solution?**
 - A. Filtration
 - B. Precipitation
 - C. Titration
 - D. Evaporation

- 2. What is the temperature difference in degrees between the freezing point and boiling point of water on the Centigrade scale at sea level?**
 - A. 50
 - B. 100
 - C. 200
 - D. 212

- 3. Casein occurs in fresh milk in the form of a:**
 - A. Solid solution
 - B. Colloidal solution
 - C. Suspension
 - D. Aqueous solution

- 4. Photosynthesis entails the absorption of:**
 - A. Oxygen and glucose
 - B. Carbon dioxide and nitrogen
 - C. Carbon dioxide and water
 - D. Water and glucose

- 5. If milk is adulterated by the addition of water, what happens to its specific gravity?**
 - A. It increases
 - B. It stays the same
 - C. It decreases
 - D. It becomes unmeasurable

6. A virus is the causative agent of:

- A. Influenza
- B. Smallpox
- C. Strep throat
- D. Malaria

7. Which of the following is NOT a method used to check milk quality?

- A. Physical appearance examination
- B. Microbial analysis
- C. Flavor testing
- D. Fermentation rate measurement

8. How is milk USUALLY tested for adequacy of homogenization?

- A. By testing its pH
- B. By observing curd formation
- C. By allowing it to stand for 48 hours
- D. By measuring its viscosity

9. What are substances in solutions that change color at a specific pH called?

- A. Solvents
- B. Indicators
- C. Buffers
- D. Catalysts

10. Atoms' nuclei are primarily made up of which particles?

- A. Electrons and protons
- B. Positrons and electrons
- C. Neutrons and protons
- D. Quarks and leptons

Answers

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

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Explanations

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1. What term describes the process used to determine the concentration of an acid in a solution?

- A. Filtration
- B. Precipitation
- C. Titration**
- D. Evaporation

Titration is the correct term used to describe the process of determining the concentration of an acid in a solution. This analytical technique involves the gradual addition of a titrant, which is a solution of known concentration, to a sample solution with an unknown concentration. By measuring the volume of titrant used to neutralize the acid, one can calculate the concentration of the acid in the original solution. Titration is widely used in various fields, including chemistry and environmental science, to quantify the amount of a substance in a sample accurately. Filtration, on the other hand, is a method used to separate solids from liquids by passing the mixture through a barrier that allows only the liquid to pass through. Precipitation refers to the formation of a solid from a solution due to a chemical reaction, often used in the context of removing substances from solutions but not for measuring concentration. Evaporation involves the removal of liquid from a solution by converting it into vapor, which is not a method for determining concentrations. Thus, titration stands out as the specific and precise method for determining the concentration of acids in solutions.

2. What is the temperature difference in degrees between the freezing point and boiling point of water on the Centigrade scale at sea level?

- A. 50
- B. 100**
- C. 200
- D. 212

The correct answer is based on the temperature difference between the freezing point and the boiling point of water, which is a fundamental concept in thermodynamics. On the Centigrade (Celsius) scale, the freezing point of water is defined as 0 degrees, while the boiling point is defined as 100 degrees at sea level. To determine the temperature difference, you simply subtract the freezing point from the boiling point: 100 degrees (boiling point) - 0 degrees (freezing point) = 100 degrees. This 100-degree difference is essential for understanding temperature scales and is commonly used in various scientific and everyday applications. The significance of this range is also foundational knowledge in fields such as meteorology and environmental science.

3. Casein occurs in fresh milk in the form of a:

- A. Solid solution
- B. Colloidal solution**
- C. Suspension
- D. Aqueous solution

Casein is a type of protein found in milk that plays a crucial role in its structure and nutritional value. In fresh milk, casein exists as a colloidal solution. This means it is dispersed in liquid but not dissolved in the way that sugar or salt would be. The colloidal nature of casein allows for tiny particles to remain suspended within the liquid, giving milk its characteristic white color and creamy texture. When milk is homogenized, the protein molecules become finely dispersed throughout the liquid, creating a stable colloid. This is distinct from a solid solution, where one substance is completely dissolved in another, or a suspension, where larger particles are mixed in but can eventually settle out, and an aqueous solution, which involves solutes being fully dissolved in water. The stability and properties of casein in the colloidal form are essential for the digestion and absorption of milk proteins in the human body. Understanding this characteristic of casein is important in fields such as food science and public health, where the nutritional aspects of milk and dairy products are often evaluated.

4. Photosynthesis entails the absorption of:

- A. Oxygen and glucose
- B. Carbon dioxide and nitrogen
- C. Carbon dioxide and water**
- D. Water and glucose

Photosynthesis is a vital process carried out by plants, algae, and some bacteria, where light energy is converted into chemical energy in the form of glucose. This process involves the absorption of specific reactants necessary for the synthesis of glucose. The correct components absorbed during photosynthesis are carbon dioxide and water. The plant takes in carbon dioxide from the atmosphere through tiny openings in the leaves called stomata. Simultaneously, water is absorbed from the soil through the roots. In the presence of sunlight, specifically through the chlorophyll in the chloroplasts, these two components undergo a series of reactions that ultimately produce glucose and oxygen as byproducts. The simplified overall equation for photosynthesis can be summarized as: $6\text{CO}_2 + 6\text{H}_2\text{O} + \text{light energy} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$. This equation illustrates the importance of both carbon dioxide and water as essential inputs for the photosynthetic process. Other options presented do not accurately represent the reactants involved in photosynthesis: oxygen and glucose are products, while nitrogen does not play a direct role in this particular process, and glucose is neither absorbed nor used as a reactant in photosynthesis. Understanding the role of these components is crucial in the field of botany, ecology

5. If milk is adulterated by the addition of water, what happens to its specific gravity?

- A. It increases
- B. It stays the same
- C. It decreases**
- D. It becomes unmeasurable

When water is added to milk, the specific gravity of the mixture decreases. Specific gravity is a measure of the density of a substance compared to the density of water. Pure milk has a specific gravity that is higher than that of water due to its constituents, which include fats, proteins, and lactose. When water is introduced into the milk, its overall density decreases because water is less dense than milk. Since specific gravity is calculated as the ratio of the density of the liquid to the density of water at a standard temperature, diluting the milk with water reduces the density of the mixture overall. As a result, the specific gravity of the adulterated milk is lower than that of pure milk, confirming that the correct answer is that it decreases.

6. A virus is the causative agent of:

- A. Influenza
- B. Smallpox**
- C. Strep throat
- D. Malaria

The correct identification of a virus as the causative agent is exemplified by smallpox, which is caused by the variola virus. This virus specifically targets the human population, leading to severe symptoms and widespread outbreaks before its eradication through vaccination efforts. The historical impact of smallpox highlights the role of viruses in public health, as they can cause significant morbidity and mortality. In contrast, influenza is also caused by a virus (influenza virus), indicating that both smallpox and influenza are associated with viral infections. However, in this context, the emphasis is specifically on smallpox, which is often more prominently recognized in discussions of viral diseases and their eradication. Strep throat, on the other hand, is caused by bacteria (Streptococcus species), and malaria is a parasitic disease caused by Plasmodium species. These distinctions underline the importance of correctly identifying pathogens when discussing diseases in public health, as the treatment and prevention strategies differ between viral, bacterial, and parasitic infections. Thus, understanding the specific causative agent is crucial for effective public health strategy formulation.

7. Which of the following is NOT a method used to check milk quality?

- A. Physical appearance examination
- B. Microbial analysis
- C. Flavor testing
- D. Fermentation rate measurement**

Fermentation rate measurement is not typically used as a method to assess milk quality. Instead, this method is more relevant for the evaluation of various fermentation products or processes, such as those involving dairy products like yogurt or cheese, rather than assessing the quality of milk itself. Milk quality is primarily determined through three key methods: physical appearance examination, microbial analysis, and flavor testing. The physical appearance examination allows for the detection of any visible defects or contamination, such as abnormal color, consistency, or presence of foreign particles. Microbial analysis is critical as it identifies the types and levels of microorganisms present in the milk, which can indicate spoilage or safety concerns. Flavor testing evaluates the taste of the milk, which can be influenced by several factors including freshness and the presence of off-flavors caused by bacterial growth or spoilage. In summary, while fermentation rate measurement may play a role in other dairy-related processes, the other methods listed are essential in directly evaluating the quality of milk itself.

8. How is milk USUALLY tested for adequacy of homogenization?

- A. By testing its pH
- B. By observing curd formation
- C. By allowing it to stand for 48 hours**
- D. By measuring its viscosity

Milk is typically tested for adequacy of homogenization by allowing it to stand for a specific period, usually around 48 hours, to observe any separation of the cream from the milk. Homogenization is a mechanical process that breaks down fat globules to a smaller size and disperses them evenly throughout the milk. When homogenization is effective, cream should not rise to the top; therefore, allowing the milk to stand enables the detection of any cream separation that would indicate inadequate homogenization. Measuring variables like pH, observing curd formation, or measuring viscosity are not standard methods for assessing the effectiveness of homogenization specifically. While pH can indicate some changes in milk quality, it does not directly assess the homogenization process. Curd formation typically relates to milk's ability to coagulate, which is influenced by factors other than just homogenization. Viscosity is related to the thickness or flow characteristics of the milk rather than its homogenization adequacy. Thus, standing the milk to check for cream separation is the most reliable method used in practice.

9. What are substances in solutions that change color at a specific pH called?

- A. Solvents
- B. Indicators**
- C. Buffers
- D. Catalysts

Substances in solutions that change color at a specific pH are known as indicators. They are typically weak acids or bases that exhibit different colors depending on the hydrogen ion concentration in the solution, which corresponds to its pH level. This property makes them essential in various chemical analyses and titrations, as they provide a visual cue for the pH of the solution. Indicators work by undergoing a chemical change when the pH reaches a certain threshold, causing a shift in color. This change can be observed visually, allowing for easy monitoring of pH levels in various applications, including environmental monitoring, food safety tests, and laboratory experiments. While solvents are the substances that dissolve other materials, and buffers are solutions that resist changes in pH upon the addition of an acid or a base, neither of these would change color in response to pH. Catalysts, on the other hand, are substances that accelerate a chemical reaction without being consumed in the process and do not pertain to changes in color related to pH. Therefore, indicators are distinctly characterized by their ability to change color based on specific pH levels.

10. Atoms' nuclei are primarily made up of which particles?

- A. Electrons and protons
- B. Positrons and electrons
- C. Neutrons and protons**
- D. Quarks and leptons

Atoms' nuclei are primarily composed of neutrons and protons. Protons carry a positive electrical charge, while neutrons are electrically neutral. Together, they make up the bulk of an atom's mass and define the identity of the element, as the number of protons determines the atomic number. Neutrons add stability to the nucleus by mitigating the repulsive forces between the positively charged protons. Other particles mentioned in the choices, like electrons, are not found in the nucleus itself; they orbit around the nucleus and contribute to atomic structure but have a negligible mass compared to protons and neutrons. Positrons are the antimatter counterparts of electrons and do not play a role in the structure of atomic nuclei. Quarks and leptons are fundamental particles, but quarks are what compose protons and neutrons rather than being a description of the nucleus itself. Thus, the correct focus on neutrons and protons highlights the essential components that make up the nucleus of an atom.

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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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