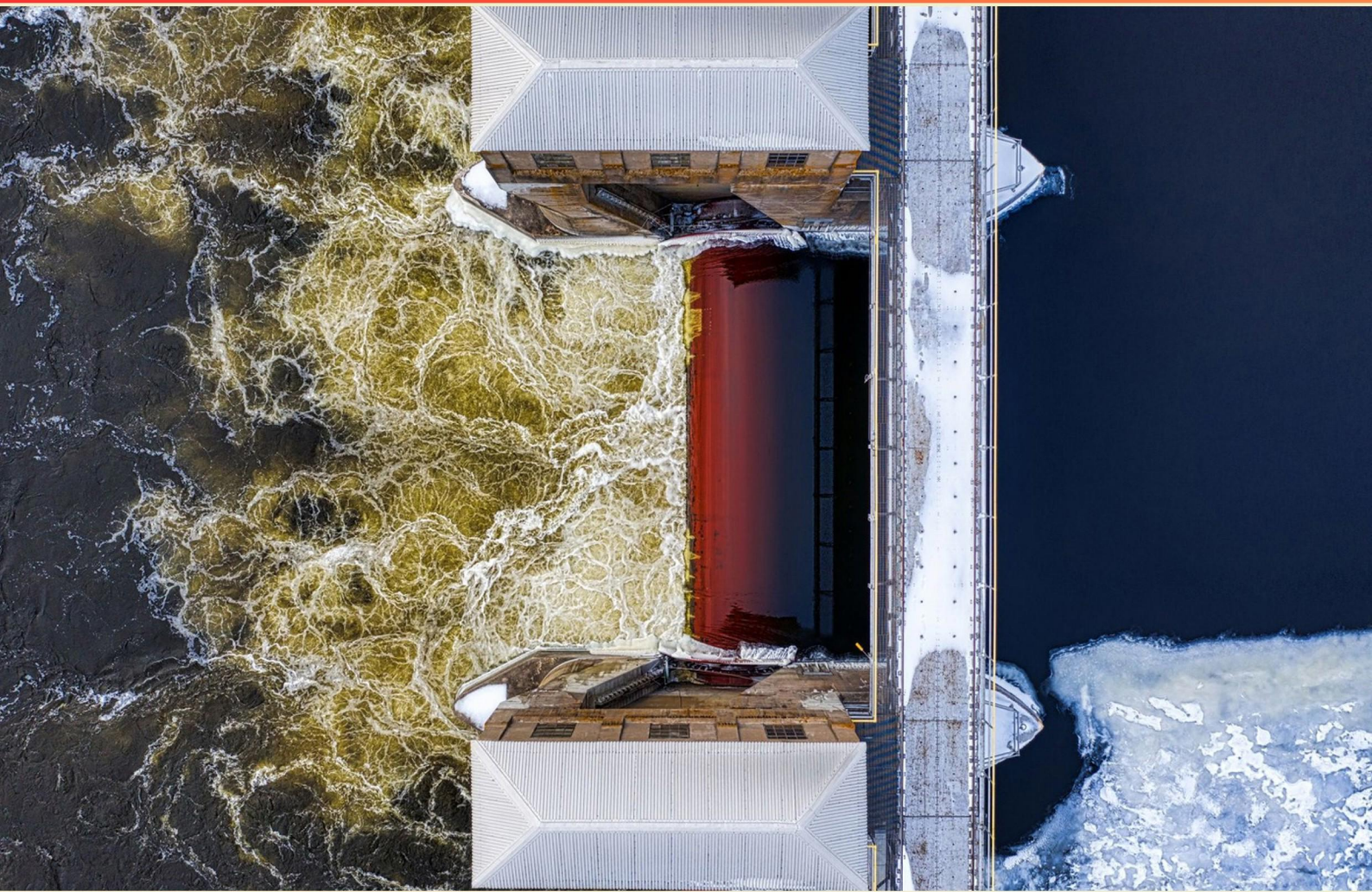


PRINCIPLES AND PRACTICE OF ENGINEERING (PE) ENVIRONMENTAL PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	16

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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 the importance of the Safe Drinking Water Act (SDWA)?**
 - A. It allows for increased industrial usage of water
 - B. It provides guidelines for water pricing
 - C. It establishes minimum health standards for drinking water quality
 - D. It focuses on groundwater extraction limits
- 2. What growth phase is a conventional activated sludge process designed to operate during?**
 - A. Exponential phase
 - B. Log phase
 - C. Endogenous phase
 - D. Stationary phase
- 3. What role do stakeholders play in environmental planning?**
 - A. They are required to provide funding for environmental projects
 - B. They help enforce regulations on environmental policies
 - C. They provide information, perspectives, and guidance during the planning process
 - D. They primarily focus on financial outcomes of environmental initiatives
- 4. What is the primary goal of the Resource Conservation and Recovery Act (RCRA)?**
 - A. To regulate air quality
 - B. To manage solid waste
 - C. To control water pollution
 - D. To promote renewable energy
- 5. What does the acronym SARA stand for in relation to hazardous waste management?**
 - A. Superfund Amendments and Reauthorization Act
 - B. Site Assessment and Recovery Act
 - C. Supervisory Act for Regulations in Agriculture
 - D. Substance and Risk Assessment Act

- 6. In bioaerosol sampling methods, which aspect is not applicable?**
- A. Measuring airborne pathogens
 - B. Assessing total compliance with TLV for culturable organisms
 - C. Monitoring environmental air quality
 - D. Sampling for volatile organic compounds
- 7. Land use planning helps to safeguard which of the following?**
- A. Unrestricted urban expansion
 - B. Resources needed for future generations
 - C. Immediate economic growth
 - D. Access to all natural resources at any time
- 8. Which of the following is a primary concern in groundwater monitoring?**
- A. Enhancing sediment stability
 - B. Tracking changes in local animal populations
 - C. Ensuring sustainable management of aquifers
 - D. Improving aesthetic values of water bodies
- 9. How is "environmental justice" defined?**
- A. The equal distribution of environmental resources among communities
 - B. The concept that all countries should have the same environmental policies
 - C. The fair treatment and meaningful involvement of all people in environmental policies
 - D. The right of companies to exploit natural resources
- 10. What is primarily responsible for acidity in surface water?**
- A. Sulfide compounds
 - B. Carbon dioxide
 - C. Nitrogen oxides
 - D. Phosphates

Answers

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

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Explanations

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1. What is the importance of the Safe Drinking Water Act (SDWA)?

- A. It allows for increased industrial usage of water
- B. It provides guidelines for water pricing
- C. It establishes minimum health standards for drinking water quality**
- D. It focuses on groundwater extraction limits

The Safe Drinking Water Act (SDWA) is a significant piece of legislation that plays a crucial role in safeguarding public health by establishing minimum health standards for drinking water quality. This law mandates the Environmental Protection Agency (EPA) to set standards for water contaminants, ensuring that the water supplied to communities is safe for human consumption. By regulating the levels of specific pollutants and requiring regular testing and reporting by public water systems, the SDWA aims to prevent harmful substances from entering the drinking water supply. This includes not only microbial contaminants but also chemical, radiological, and other potential hazards. In doing so, the SDWA helps to protect vulnerable populations, reduces the risk of waterborne diseases, and enhances overall public health. The establishment of these standards is foundational for maintaining the safety and integrity of water systems across the United States, making this aspect of the SDWA indispensable in the context of environmental public health.

2. What growth phase is a conventional activated sludge process designed to operate during?

- A. Exponential phase
- B. Log phase
- C. Endogenous phase**
- D. Stationary phase

The conventional activated sludge process is primarily designed to operate during the endogenous phase of microbial growth. During this phase, the microbial population has reached a maximum and is using existing cellular reserves for energy and maintenance rather than actively multiplying. In the context of wastewater treatment, this phase represents a period where microorganisms are effectively removing organic materials from the influent, transforming them into biomass or biosolids, which can be settled and separated. The endogenous phase is crucial for optimizing the treatment efficiency and stability of the process, as it allows for the efficient use of the biomass in degrading organic pollutants, while also promoting the settling properties of the sludge. Understanding the growth phases can help in managing the activated sludge system more effectively, as the growth and sedimentation characteristics differ between the phases. The design to operate during the endogenous phase maximizes operational stability and treatment performance in the context of conventional activated sludge systems.

3. What role do stakeholders play in environmental planning?

- A. They are required to provide funding for environmental projects
- B. They help enforce regulations on environmental policies
- C. They provide information, perspectives, and guidance during the planning process**
- D. They primarily focus on financial outcomes of environmental initiatives

In environmental planning, stakeholders play a critical role by providing information, perspectives, and guidance during the planning process. Their involvement is essential because they often possess valuable local knowledge, expertise, and resources that can enhance the planning and decision-making process. This diverse input helps ensure that various viewpoints, especially those of affected communities, are considered, leading to more comprehensive and effective solutions. By engaging stakeholders, planners can better understand the social, economic, and environmental implications of proposed projects and policies. This collaboration fosters a sense of ownership among stakeholders, which can enhance community support and lead to more successful implementation of environmental initiatives. Ultimately, stakeholder participation is fundamental in creating balanced and equitable environmental plans that reflect a range of interests and priorities.

4. What is the primary goal of the Resource Conservation and Recovery Act (RCRA)?

- A. To regulate air quality
- B. To manage solid waste**
- C. To control water pollution
- D. To promote renewable energy

The primary goal of the Resource Conservation and Recovery Act (RCRA) is to manage solid waste. This act was established to provide a framework for the proper management and disposal of hazardous and non-hazardous solid waste. RCRA focuses on waste minimization and resource conservation through various strategies, including encouraging recycling and treatment of hazardous waste to protect human health and the environment. RCRA's comprehensive approach includes the regulation of waste from its creation to disposal, ensuring that waste is managed safely and sustainably. This involves establishing criteria for waste treatment, storage, and disposal facilities, as well as guidelines for states to create their waste management programs. In comparison to the other options, air quality regulation is addressed under separate legislation, such as the Clean Air Act. Water pollution control is primarily governed by the Clean Water Act. Promoting renewable energy falls outside the scope of RCRA, which is specifically focused on solid and hazardous waste management rather than energy policies.

5. What does the acronym SARA stand for in relation to hazardous waste management?

- A. Superfund Amendments and Reauthorization Act**
- B. Site Assessment and Recovery Act
- C. Supervisory Act for Regulations in Agriculture
- D. Substance and Risk Assessment Act

The acronym SARA stands for the Superfund Amendments and Reauthorization Act. This legislation, enacted in 1986, is an important piece of environmental law that reauthorized and modified the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund Act. SARA was designed to enhance the federal government's ability to respond to hazardous substance releases and to ensure the cleanup of sites contaminated with hazardous waste. One of the key features of SARA is that it emphasizes the importance of community involvement in the cleanup process, requiring public participation in decision-making. It also introduced new enforcement provisions and established the need for state involvement in the cleanup of hazardous waste sites. The act aimed to improve the effectiveness of cleanup processes and mandated regular review of the remedy selected for site cleanups. In particular, SARA brought significant changes in regulations related to hazardous waste management, making it essential for professionals in environmental engineering and related fields to be familiar with its implications and requirements. This background and the focus on community safety and environmental protection underscore why the Superfund Amendments and Reauthorization Act is the correct interpretation of the acronym SARA.

6. In bioaerosol sampling methods, which aspect is not applicable?

- A. Measuring airborne pathogens
- B. Assessing total compliance with TLV for culturable organisms**
- C. Monitoring environmental air quality
- D. Sampling for volatile organic compounds

In bioaerosol sampling methods, assessing total compliance with Threshold Limit Values (TLV) for culturable organisms is not applicable because TLVs are typically established for exposure limits of chemical substances rather than biological agents. TLVs provide guidelines for airborne chemicals that can have adverse health effects, but they do not apply to bioaerosols in the same way because biological organisms are not treated as chemicals with specific concentration limits. On the other hand, the other aspects related to bioaerosol sampling methods are relevant. Measuring airborne pathogens involves analyzing the presence of harmful microbes in the air, which is crucial for public health assessments. Monitoring environmental air quality can include evaluating both chemical and biological components, allowing for a comprehensive understanding of air contamination. Sampling for volatile organic compounds (VOCs) is a separate process that targets chemicals but does not fall under the umbrella of bioaerosol sampling, which focuses on biological particulates in the air. Thus, while all the other options relate directly to bioaerosol assessment and effects, assessing compliance with TLVs specifically applies to chemical substances and not to the biological sampling processes typically involved in bioaerosol methodologies.

7. Land use planning helps to safeguard which of the following?

- A. Unrestricted urban expansion
- B. Resources needed for future generations**
- C. Immediate economic growth
- D. Access to all natural resources at any time

Land use planning plays a crucial role in the sustainable management of land and resources, ensuring that they are used efficiently and responsibly. The correct response emphasizes the importance of safeguarding resources needed for future generations. This long-term perspective is essential, as it helps balance development with environmental protection, ensuring that critical resources such as water, soil, and biodiversity are preserved. Through effective land use planning, decision-makers can create zoning laws, conservation areas, and sustainable development guidelines that protect natural resources from overexploitation and degradation. This approach not only promotes environmental health but also supports economic stability by ensuring that the resources necessary for future growth and well-being are available. In contrast, unrestricted urban expansion might lead to urban sprawl, which can degrade natural habitats and essential resources. Immediate economic growth, while beneficial in the short term, can often come at the expense of environmental sustainability if not managed properly. Likewise, the idea of having access to all natural resources at any time can promote unsustainable practices and eventual depletion of those resources. Thus, the emphasis on safeguarding resources for future generations aligns with core principles of environmental sustainability and responsible land use practices.

8. Which of the following is a primary concern in groundwater monitoring?

- A. Enhancing sediment stability
- B. Tracking changes in local animal populations
- C. Ensuring sustainable management of aquifers**
- D. Improving aesthetic values of water bodies

Groundwater monitoring focuses on understanding and managing the quality and quantity of groundwater resources. A primary concern in this area is ensuring sustainable management of aquifers. This involves assessing factors such as water levels, flow rates, and contamination, which are crucial for maintaining the health of aquifers and ensuring that the water supply remains viable for both current and future needs. Sustainable management of aquifers encompasses a range of activities, including monitoring changes in water quality due to pollutants, tracking the extraction rates to prevent over-extraction, and managing recharge areas to maintain groundwater levels. Ensuring that aquifers are sustainably managed is essential for supporting community water needs, protecting ecosystems that depend on groundwater, and mitigating the risks of groundwater depletion. In contrast, while enhancing sediment stability, tracking changes in local animal populations, and improving aesthetic values of water bodies are important environmental considerations, they do not directly address the immediate concerns related to groundwater monitoring. The focus on sustainable management highlights the need to balance human usage with environmental protection, making it integral to effective groundwater monitoring strategies.

9. How is "environmental justice" defined?

- A. The equal distribution of environmental resources among communities
- B. The concept that all countries should have the same environmental policies
- C. The fair treatment and meaningful involvement of all people in environmental policies**
- D. The right of companies to exploit natural resources

The concept of "environmental justice" is fundamentally about ensuring that all individuals, regardless of race, ethnicity, income level, or other factors, have fair treatment and meaningful involvement in the development and enforcement of environmental regulations and policies. This means that every community should have a voice in decisions that affect their environment and health, and that no group should bear a disproportionate share of the negative environmental consequences of industrial, governmental, and commercial operations. This definition emphasizes the importance of inclusivity and equity in environmental decision-making processes. It addresses the historical context in which marginalized communities often face greater exposure to environmental hazards and have less access to environmental benefits. Therefore, advocating for environmental justice means striving for policies that account for these disparities and ensure everybody's rights are respected. In contrast, other options refer to different concepts. The equal distribution of environmental resources implies a geometric fairness in resource allocation, which, while important, does not capture the essence of fairness in treatment and involvement. The idea that all countries should have the same environmental policies overlooks the diverse context and needs of different regions. Lastly, the right of companies to exploit natural resources does not reflect the principles of equity or justice, as it can lead to exploitation without regard for communities affected by such actions.

10. What is primarily responsible for acidity in surface water?

- A. Sulfide compounds
- B. Carbon dioxide**
- C. Nitrogen oxides
- D. Phosphates

The primary factor responsible for acidity in surface water is carbon dioxide. When carbon dioxide is dissolved in water, it reacts to form carbonic acid, which contributes to the overall acidity of the water. This process occurs naturally in the environment and is a critical part of the carbon cycle. The presence of carbon dioxide in the atmosphere and its ability to dissolve in water lead to the formation of acids, impacting the pH levels of surface waters. While sulfide compounds, nitrogen oxides, and phosphates can influence water quality and may have ecological impacts, they do not play as direct a role in the acidity of surface water as carbon dioxide does. Sulfide compounds can lead to the formation of sulfuric acid in specific conditions, and nitrogen oxides can contribute to acid rain; however, the primary mechanism for acidity in the broader context of surface water remains the dissolved carbon dioxide. Phosphates are more closely related to nutrient loading and eutrophication rather than directly affecting acidity. Thus, the foundational role of carbon dioxide in forming carbonic acid makes it the main contributor to surface water acidity.

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://pe-environmental.examzify.com>

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

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