# DSST Environmental Science Practice Exam (Sample)

## Study Guide

BY EXAMZIFY

**Everything you need from our exam experts!**

# 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**

# 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. How does phosphorus typically move through different ecosystem components?**

**A. Through gaseous forms in the atmosphere**

**B. Via organic and inorganic compounds**

**C. Only in liquid forms in water bodies**

**D. Through atmospheric absorption**

**2. What environmental condition is typically found in temperate rain forests?**

**A. High temperatures and low humidity**

**B. High precipitation and moderate temperatures**

**C. Low precipitation and high humidity**

**D. Extreme seasonal changes**

**3. What is the purpose of photovoltaic cells?**

**A. To heat water directly**

**B. To convert sunlight into electricity**

**C. To collect wind energy**

**D. To store solar energy**

**4. What does El Niño refer to?**

**A. A periodic increase in ocean temperature**

**B. A long-term climate change**

**C. A short-term periodic change in ocean temperatures**

**D. A permanent change in ocean currents**

**5. Reforestation is defined as:**

**A. Removing trees to increase land use**

**B. Planting trees to restore a forested area**

**C. Protecting an ecosystem from harm**

**D. Monitoring population of invasive species**

**6. Which of the following is NOT a factor that determines where organisms live in aquatic ecosystems?**

- **A. Food availability**
- **B. Sunlight**
- **C. Oxygen levels**
- **D. Color of the water**

**7. What does salinization refer to?**

- **A. The process of eroding soil**
- **B. The accumulation of salts in the soil**
- **C. The leaching of nutrients from soil**
- **D. The addition of fertilizers to soil**

**8. What approach can help restore areas affected by invasive species?**

- **A. Maximizing animal grazing**
- **B. Planting only invasive plants**
- **C. Killing invasive plants and planting natives**
- **D. Ignoring land recovery efforts**

**9. What does genetic diversity refer to?**

- **A. The variety of habitats in an ecosystem**
- **B. All the different genes within all the members of a population**
- **C. The number of ecosystems in a region**
- **D. The total biomass of an ecosystem**

**10. What is point-source pollution?**

- **A. Pollution from a large area**
- **B. Pollution from a single identifiable source**
- **C. Pollution that occurs sporadically**
- **D. Pollution that affects only air quality**

# Answers

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

# Explanations

## 1. How does phosphorus typically move through different ecosystem components?

**A. Through gaseous forms in the atmosphere**

**B. Via organic and inorganic compounds**

**C. Only in liquid forms in water bodies**

**D. Through atmospheric absorption**

**Phosphorus typically moves through ecosystems primarily via organic and inorganic compounds. This nutrient is an essential element for life, playing a crucial role in biological processes such as energy transfer (in the form of ATP), photosynthesis, and the synthesis of nucleic acids. In terrestrial ecosystems, phosphorus is often found in the soil as inorganic phosphates, which are taken up by plants. These plants, in turn, are consumed by animals, leading to organic forms of phosphorus as it moves up the food chain. When organisms excrete waste or decompose, the phosphorus returns to the soil, contributing to the cycling of this vital nutrient. In aquatic ecosystems, phosphorus is also present in both dissolved forms (inorganic) and bound within organic matter (like detritus). Algae and aquatic plants can take up phosphorus in these forms, thus integrating it into the aquatic food web. The cycling of phosphorus in these ecosystems can have significant implications, especially concerning issues like eutrophication, where excess phosphorus leads to algal blooms and subsequent ecological problems. Phosphorus does not typically move through gaseous forms in the atmosphere or through atmospheric absorption, as it is largely not volatile under normal environmental conditions. It mainly exists in the environment in solid and liquid states**

## 2. What environmental condition is typically found in temperate rain forests?

**A. High temperatures and low humidity**

**B. High precipitation and moderate temperatures**

**C. Low precipitation and high humidity**

**D. Extreme seasonal changes**

**Temperate rainforests are characterized by high precipitation levels and moderate temperatures, making them distinct from other forest types. These regions typically receive ample moisture throughout the year, often exceeding 50 inches (127 cm) annually, which supports the rich biodiversity found within the forest ecosystem. The moderate temperatures—generally mild winters and cool summers—contribute to the unique climates of temperate rainforests, ensuring that conditions remain conducive for the growth of diverse plant species, including towering trees like Douglas firs and redwoods. This combination of high precipitation and moderate temperatures creates the lush, green environment typical of temperate rainforests, providing essential habitats for a variety of wildlife, including numerous bird species, mammals, and amphibians. Thus, the correct answer reflects the defining climatic characteristics of temperate rainforests, which differentiate these ecosystems from those associated with other choices.**

## 3. What is the purpose of photovoltaic cells?

**A. To heat water directly**

**B. To convert sunlight into electricity**

**C. To collect wind energy**

**D. To store solar energy**

**Photovoltaic cells are specifically designed to convert sunlight directly into electricity through the photovoltaic effect. When sunlight strikes the surface of these cells, it excites electrons in the semiconductor material, creating a flow of electric current. This process allows for the direct harnessing of solar energy, making photovoltaic cells a crucial component of solar panels used in renewable energy systems. The other options represent different energy technologies; for instance, heating water directly relates to solar thermal systems, which use sunlight to increase the temperature of water rather than generating electricity. Similarly, collecting wind energy pertains to wind turbines, which convert kinetic energy from the wind into electrical power. Storing solar energy refers to battery technologies that can store electricity generated by solar systems for later use, but does not involve the conversion process of photovoltaic cells themselves. Thus, the primary purpose of photovoltaic cells remains their function in transforming sunlight into usable electrical energy.**

## 4. What does El Niño refer to?

**A. A periodic increase in ocean temperature**

**B. A long-term climate change**

**C. A short-term periodic change in ocean temperatures**

**D. A permanent change in ocean currents**

**El Niño refers to a short-term periodic change in ocean temperatures, typically occurring in the central and eastern tropical Pacific Ocean. This phenomenon is characterized by a rise in sea surface temperatures, which can significantly affect global weather patterns. The fluctuations associated with El Niño typically occur every two to seven years and can last anywhere from a few months to over a year. These temperature changes in the ocean can lead to various climatic effects, such as increased rainfall in some regions and droughts in others, emphasizing the interconnectedness of oceanic and atmospheric systems. The impacts are felt globally, making understanding El Niño crucial for predicting and preparing for weather variations that might affect agriculture, weather patterns, and ecosystems. The other options, while related to oceanic and climatic phenomena, do not accurately capture the specific nature of El Niño. A periodic increase in ocean temperature does occur during El Niño, but it is the short-term and cyclical nature of these temperature fluctuations that defines the phenomenon. Long-term climate changes might refer to the broader concept of climate change which is not specific to El Niño, and a permanent change in ocean currents does not accurately describe the oscillatory characteristics of El Niño, which is a temporary deviation rather than a lasting change.**

## 5. Reforestation is defined as:

**A. Removing trees to increase land use**

**B. Planting trees to restore a forested area**

**C. Protecting an ecosystem from harm**

**D. Monitoring population of invasive species**

**Reforestation is accurately defined as the process of planting trees to restore a forested area that has been depleted or damaged. This practice aims to re-establish a healthy forest ecosystem, which can provide numerous environmental benefits, such as enhancing biodiversity, improving air and soil quality, and sequestering carbon dioxide, thereby mitigating climate change. The importance of reforestation lies in its ability to restore not only the physical presence of trees but also the complex interactions these trees have within their ecosystems. This includes supporting wildlife habitats and promoting ecological balance. In contrast, the options related to land removal or ecosystem protection do not capture the essence of reforestation, which is specifically focused on the act of planting trees to re-establish forested areas. Similarly, monitoring invasive species, while an important aspect of conservation, does not align with the core concept of reforestation.**

## 6. Which of the following is NOT a factor that determines where organisms live in aquatic ecosystems?

**A. Food availability**

**B. Sunlight**

**C. Oxygen levels**

**D. Color of the water**

**Understanding the factors that determine where organisms live in aquatic ecosystems is essential in environmental science. The color of the water does not directly influence the habitat preferences of aquatic organisms in the way that food availability, sunlight, and oxygen levels do. Food availability is crucial as it dictates the presence and abundance of organisms, since they need adequate nutrition to survive and reproduce. Sunlight is essential in aquatic ecosystems, especially for photosynthetic organisms like phytoplankton, which form the base of the food web by providing energy for other aquatic life. Oxygen levels are another significant factor since most aquatic organisms rely on dissolved oxygen for respiration; therefore, areas with higher oxygen levels tend to support more diverse and abundant life. In contrast, while the color of the water can be indicative of certain conditions (such as sediment presence or the type of organisms present), it does not inherently determine the suitability of a habitat for organisms in the same way the other factors do. Thus, the color of the water does not play a direct role in influencing where organisms can thrive within aquatic ecosystems.**

## 7. What does salinization refer to?

**A. The process of eroding soil**

**B. The accumulation of salts in the soil**

**C. The leaching of nutrients from soil**

**D. The addition of fertilizers to soil**

**Salinization refers specifically to the accumulation of salts in the soil, which can occur due to a variety of factors such as irrigation practices, evaporation, and inadequate drainage. This process can lead to negative impacts on soil health, plant growth, and overall agricultural productivity. When salts build up in the soil, it can lead to a disruption in the availability of water and nutrients for plants. High salinity can inhibit plant growth and lead to reduced crop yields, as many plants are sensitive to salt levels in their growing environment. This phenomenon is particularly prevalent in arid and semi-arid regions where irrigation is commonly used, as water used for irrigation can carry dissolved salts, which accumulate when the water evaporates. Proper management techniques are necessary to mitigate salinization, such as improving drainage and rotating crops to help leach salts away from the root zone.**

## 8. What approach can help restore areas affected by invasive species?

**A. Maximizing animal grazing**

**B. Planting only invasive plants**

**C. Killing invasive plants and planting natives**

**D. Ignoring land recovery efforts**

**The approach that involves killing invasive plants and planting native species is effective because it directly addresses the problem posed by invasive species. Invasive plants often outcompete native flora for resources such as sunlight, water, and nutrients, leading to a decline in biodiversity and the degradation of ecosystems. By removing invasive plants, the native species have a chance to regenerate and reclaim their ecological niche, helping to restore the balance of the ecosystem. Moreover, planting native species is crucial because these plants are well-adapted to the local environment and can thrive without the pressures of invasive competition. They also provide habitat and food for local wildlife, which further supports the recovery of the ecosystem. This strategy not only aids in restoring the ecological integrity of the area but also enhances its resilience against future invasions. In contrast, maximizing animal grazing could lead to further degradation of the land if not managed properly, as overgrazing can damage vegetation and soil quality. Planting only invasive plants would exacerbate the problem, increasing the dominance of non-native species and worsening the biodiversity crisis. Ignoring land recovery efforts would allow the invasive species to continue their spread unchecked, leading to long-term ecological damage. Thus, the method of eliminating invasive species while reintroducing native plants stands out as**

## 9. What does genetic diversity refer to?

**A. The variety of habitats in an ecosystem**

**B. All the different genes within all the members of a population**

**C. The number of ecosystems in a region**

**D. The total biomass of an ecosystem**

**Genetic diversity refers to all the different genes within all the members of a population. This concept highlights the variability of genetic information within a species, which can include variations in alleles, gene combinations, and overall genetic makeup. High genetic diversity within a population is crucial for the adaptability and resilience of organisms to changes in the environment, such as disease outbreaks or climate fluctuations. It allows for a greater chance that some individuals within the population possess traits that will enable them to survive and reproduce in challenging conditions, thereby sustaining the population over time. This variability is fundamental to the process of evolution and the overall health of ecosystems, as it contributes to the stability and functionality of biological communities.**

## 10. What is point-source pollution?

**A. Pollution from a large area**

**B. Pollution from a single identifiable source**

**C. Pollution that occurs sporadically**

**D. Pollution that affects only air quality**

**Point-source pollution is defined as pollution that originates from a single identifiable source, making it easier to regulate and manage compared to other types of pollution. This type of pollution can typically be traced back to specific locations, such as wastewater discharge from a factory or emissions from a specific smokestack. Because the source of the pollutants is clearly defined, it allows for targeted regulatory measures and remediation efforts to control and reduce the pollution coming from that source. In contrast, pollution from a large area refers to non-point source pollution, which is more diffuse and challenging to manage. Sporadic pollution suggests irregular occurrences, which is not characteristic of point-source pollution, where the source is consistent and identifiable. Additionally, pollution that only affects air quality would not encompass the full range of impacts associated with point-source pollution, as it can affect water, soil, and various environmental media depending on the origin of the pollutants. The clarity and direct correlation between the pollution source and the environmental impact are key characteristics of point-source pollution.**

# 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://dsstenvironmentalsci.examzify.com**

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