Science PSSA Practice Test (Sample)

Study Guide

BY EXAMZIFY

Everything you need from our exam experts!

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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

1. Which term refers to harmful materials that can enter the biosphere?

A. Contaminants

B. Pollutants

C. Toxins

D. Hazards

2. Which term describes land that consists of marshes or swamps and is characterized by saturated conditions?

A. Wetland

B. Open water

C. Wet prairie

D. Floodplain

3. What is the term for the temperature at which a liquid turns into a gas?

A. Melting point

B. Freezing point

C. Boiling point

D. Condensation point

4. What do we call an organism that lives in or on another organism?

A. Predator

B. Parasite

C. Symbiont

D. Commensal

5. In terms of environmental water flow, what does infiltration specifically refer to?

A. Water moving from plants to the atmosphere

B. Water entering the soil from surface runoff

C. Water being stored in underground reservoirs

D. Water evaporating from surfaces

6. In physics, what is used to study forces acting on an object?

- **A. Equilibrium**
- **B. Kinematics**
- **C. Dynamics**
- **D. Statistics**

7. What type of information is supported by observations and is considered true?

- **A. Theory**
- **B. Opinion**
- **C. Fact**
- **D. Hypothesis**

8. Which type of pollution originates from various diffuse sources rather than a specific point?

- **A. Point source pollution**
- **B. Direct pollution**
- **C. Nonpoint source pollution**
- **D. Industrial pollution**

9. Which tool is commonly used to measure mass?

- **A. Beaker**
- **B. Pan balance**
- **C. Graduated cylinder**
- **D. Thermometer**

10. Which system uses feedback from the output to control its input?

- **A. Open loop system**
- **B. Closed loop system**
- **C. Feedback system**
- **D. Input control system**

Answers

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

Explanations

1. Which term refers to harmful materials that can enter the biosphere?

A. Contaminants

B. Pollutants

C. Toxins

D. Hazards

The term that refers to harmful materials capable of entering the biosphere is "pollutants." Pollutants are substances that can cause adverse effects on the environment and living organisms when they are introduced into ecosystems. These can come from a variety of sources, such as industrial discharge, agricultural runoff, or waste materials. Pollutants can affect air, water, and soil quality, leading to negative impacts on health, biodiversity, and ecological balance. While contaminants, toxins, and hazards may relate to harmful materials, they have more specific meanings. Contaminants can refer to any substance that alters the purity of an environment, not necessarily implying harm. Toxins specifically refer to poisonous substances produced by living organisms. Hazards are risks or dangers that might not always involve an actual harmful material but indicate the potential for harm. Therefore, "pollutants" is the most appropriate term for materials that cause contamination and harm within the biosphere.

2. Which term describes land that consists of marshes or swamps and is characterized by saturated conditions?

A. Wetland

B. Open water

C. Wet prairie

D. Floodplain

The term that describes land consisting of marshes or swamps and characterized by saturated conditions is "wetland." Wetlands are vital ecosystems that typically have standing water or are saturated with water for part of the year. They provide important habitats for a diverse range of plants and animals, help to improve water quality by filtering pollutants, and play a critical role in flood control by absorbing excess water. Other choices represent different types of environments: "open water" refers to areas of unobstructed water bodies, while "wet prairie" specifically refers to a type of wetland that has a predominance of grass species and is saturated but not continuously flooded. "Floodplain" describes the flat area adjacent to rivers that is prone to flooding but does not solely denote wetlands. These distinctions clarify why "wetland" is the most accurate term for marshy or swampy land with saturated conditions.

3. What is the term for the temperature at which a liquid turns into a gas?

A. Melting point

B. Freezing point

C. Boiling point

D. Condensation point

The term for the temperature at which a liquid turns into a gas is known as the boiling point. This process occurs when the vapor pressure of the liquid equals the atmospheric pressure surrounding it. At this temperature, molecules within the liquid gain enough energy to overcome the intermolecular forces that keep them in the liquid state, allowing them to break free and enter the gas phase.   Understanding the boiling point is crucial in various scientific applications, including cooking, chemical reactions, and understanding environmental processes. It's different from the melting point, which is the temperature where a solid turns into a liquid, and the freezing point, which is where a liquid turns into a solid. The condensation point, on the other hand, refers to the temperature at which a gas turns back into a liquid, which is the reverse process of boiling. Hence, boiling point accurately describes the transition of a liquid to a gas at a specific temperature under normal atmospheric conditions.

4. What do we call an organism that lives in or on another organism?

A. Predator

B. Parasite

C. Symbiont

D. Commensal

An organism that lives in or on another organism is referred to as a parasite. Parasites depend on their hosts for survival, often benefiting at the expense of the host. This relationship can be detrimental to the host's health, as parasites can consume the host's resources or inflict harm.   In contrast, the other terms describe different types of biological relationships. A predator hunts and kills another organism, known as prey, for survival, while a symbiont refers to organisms that have a mutualistic relationship, benefiting both parties involved. Commensals live on or in another organism but do not harm it, typically gaining benefits such as shelter or nutrients without affecting the host positively or negatively. Thus, the definition of a parasite is specifically tied to the harmful dependence on another organism.

5. In terms of environmental water flow, what does infiltration specifically refer to?

A. Water moving from plants to the atmosphere

B. Water entering the soil from surface runoff

C. Water being stored in underground reservoirs

D. Water evaporating from surfaces

Infiltration specifically refers to the process by which water enters the soil from the surface, particularly as surface runoff accumulates. When precipitation falls to the ground, some of it flows over the surface, but a portion seeps into the soil. This movement of water from the surface into the soil is crucial for replenishing groundwater supplies and maintaining soil moisture, which is vital for plant growth and ecosystem health. The role of infiltration is significant in the water cycle, as it contributes to groundwater recharge, influences agricultural productivity, and affects surface water levels. Understanding infiltration helps in managing water resources and mitigating issues like flooding and soil erosion, emphasizing its importance in environmental science.

6. In physics, what is used to study forces acting on an object?

A. Equilibrium

B. Kinematics

C. Dynamics

D. Statistics

In physics, the study of forces acting on an object falls under the branch known as dynamics. Dynamics specifically focuses on the forces and their effect on motion. It encompasses analyzing how forces cause objects to accelerate, change direction, or remain at rest. This branch of physics examines both the causes of motion (forces) and the resulting changes in motion (acceleration). On the other hand, equilibrium concerns situations where the net forces acting on an object are zero, leading to constant motion or rest, but it does not address the forces themselves in a changing motion scenario. Kinematics deals primarily with the description of motion without regard for the forces that cause it, focusing instead on concepts like velocity and displacement over time. Statistics, while a valuable field in analyzing data, does not specifically relate to the mechanics of forces and motion in physics. Thus, dynamics is the most relevant and accurate choice for understanding how forces influence the behavior of objects.

7. What type of information is supported by observations and is considered true?

A. Theory

B. Opinion

<u>C. Fact</u>

D. Hypothesis

The correct answer is fact. A fact refers to information that is based on observable phenomena and can be verified. It is something that is accepted as true and is supported by evidence, often derived from direct observation or experimentation. For example, the boiling point of water at sea level is a fact because it can be consistently observed and measured. In contrast, a theory is a broader concept that explains a range of observations and is supported by substantial evidence, but it is not considered an absolute truth. It can be refined or rejected with new evidence. An opinion represents a personal belief or judgment that may not necessarily be grounded in observable phenomena. A hypothesis is a proposed explanation based on limited evidence, which is then tested through further observation and experimentation, but it has not yet been proven to be true or false. Thus, a fact stands out as the most reliable type of information that is backed by observations and widely accepted as true.

8. Which type of pollution originates from various diffuse sources rather than a specific point?

A. Point source pollution

B. Direct pollution

<u>C. Nonpoint source pollution</u>

D. Industrial pollution

Nonpoint source pollution is characterized by its origin from multiple, diffuse sources that are not easily identifiable as single points of discharge. This type of pollution often results from cumulative effects of various activities across larger areas, such as agricultural runoff, urban runoff, and atmospheric deposition. For instance, when rainwater flows over surfaces like roads, lawns, and farms, it can collect pollutants such as sediment, fertilizers, pesticides, and oils, ultimately entering streams, rivers, and lakes. Because there is no single location to address or control this pollution, it makes managing and mitigating its effects more challenging. This is contrasted with point source pollution, which emanates from a single identifiable source, such as a factory discharge pipe. Direct pollution typically refers to intentional pollution events but does not emphasize diffuse origins. Industrial pollution can be point source if referring to emissions or waste released from a specific facility. Nonpoint source pollution is crucial in environmental studies as it sheds light on the broader impact of land use and human activities on ecosystems and water quality.

9. Which tool is commonly used to measure mass?

A. Beaker

B. Pan balance

C. Graduated cylinder

D. Thermometer

The pan balance is an instrument designed specifically for measuring mass. It operates by balancing an object of unknown mass against a known mass, allowing for an accurate measurement of the object's mass in grams or kilograms. The principle behind a pan balance is based on equilibrium; when the weights on both sides are equal, it indicates that the mass of the object being measured matches that of the calibrated weights. In contrast, the other tools listed serve different purposes. A beaker is typically used for measuring volume, often containing liquids. A graduated cylinder is also meant for measuring liquid volume more accurately than a beaker. A thermometer is specifically used to measure temperature. Since mass measurement requires a balance of forces, the pan balance is the appropriate choice for this task.

10. Which system uses feedback from the output to control its input?

A. Open loop system

B. Closed loop system

C. Feedback system

D. Input control system

A closed loop system is one that utilizes feedback from its output to adjust and control its input. This means that it continually monitors the output and makes necessary adjustments to ensure the output remains within desired parameters. This feedback mechanism allows for self-regulation and helps maintain stability and accuracy in a wide range of applications, from simple thermostats to complex automated processes. In contrast, an open loop system does not use feedback; it operates solely based on predetermined inputs without correcting for any deviations in output. Feedback systems can be synonymous with closed loop systems, but the term "closed loop system" specifically describes the nature of utilizing feedback effectively for control. An input control system does not inherently imply the use of feedback from the output, which is essential for the definition of a closed loop system. Thus, the closed loop system is the precise term that encompasses the idea of feedback-driven control.

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://sciencepssa.examzify.com

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