

HiSet Science Practice Test (Sample)

Study Guide



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

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- 1. What is one main function of the muscular system?**
 - A. Protection of organs**
 - B. Production of hormones**
 - C. Facilitating movement**
 - D. Storing minerals**

- 2. Which gas is essential for human respiration?**
 - A. Carbon Dioxide**
 - B. Nitrogen**
 - C. Hydrogen**
 - D. Oxygen**

- 3. What part of the brain is primarily responsible for fine motor skills, balance, and coordination?**
 - A. Cerebrum**
 - B. Cerebellum**
 - C. Brainstem**
 - D. Medulla Oblongata**

- 4. What organ is primarily responsible for regulating blood sugar levels?**
 - A. Liver**
 - B. Pancreas**
 - C. Kidney**
 - D. Heart**

- 5. Which compounds contain nitrogen and oxygen and are important for plant growth?**
 - A. Nitrites**
 - B. Nitrates**
 - C. Phosphates**
 - D. Sulfates**

- 6. What is the basic unit of all forms of life?**
- A. Cell**
 - B. Organ**
 - C. Tissue**
 - D. Atom**
- 7. What term refers to the movement of carbon from the nonliving environment into living things and back?**
- A. Photosynthesis**
 - B. Carbon Cycle**
 - C. Nitrogen Cycle**
 - D. Hydrological Cycle**
- 8. What is the primary goal of organized community efforts in health?**
- A. To diagnose diseases**
 - B. To prevent disease and promote health**
 - C. To provide treatment for existing conditions**
 - D. To increase hospital capacities**
- 9. Which organisms are responsible for breaking down the dead remains of other organisms?**
- A. Consumers**
 - B. Producers**
 - C. Decomposers**
 - D. Carnivores**
- 10. What are inorganic nutrients that help regulate many chemical reactions in the body known as?**
- A. Vitamins**
 - B. Minerals**
 - C. Electrolytes**
 - D. Sugars**

Answers

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

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Explanations

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1. What is one main function of the muscular system?

- A. Protection of organs
- B. Production of hormones
- C. Facilitating movement**
- D. Storing minerals

The muscular system plays a crucial role in facilitating movement throughout the body. Muscles work in coordination with the skeletal system to enable various types of movement including walking, running, jumping, and even finer movements such as writing or playing an instrument. When muscles contract, they pull on bones to create movement at the joints. This interaction between muscles and bones is essential not only for voluntary movements but also for involuntary actions, such as the beating of the heart and movements of the digestive tract. Overall, the functionality of the muscular system is foundational to maintaining mobility and performing daily activities.

2. Which gas is essential for human respiration?

- A. Carbon Dioxide
- B. Nitrogen
- C. Hydrogen
- D. Oxygen**

Oxygen is essential for human respiration because it is the gas that our cells use to produce energy. The process of cellular respiration involves taking in oxygen and using it to help convert glucose (a type of sugar) into adenosine triphosphate (ATP), which is the energy currency of the cell. This chemical reaction also produces carbon dioxide as a byproduct, which we then exhale. In the lungs, oxygen from the air we breathe enters the bloodstream and is carried to cells throughout the body. Without a sufficient supply of oxygen, cells cannot perform their necessary functions, leading to the failure of organs and ultimately endangering life. This is why maintaining adequate oxygen levels in the environment is crucial for health and survival. Other gases, like carbon dioxide, nitrogen, and hydrogen, play different roles in the body or the environment, but they do not serve as the primary gas required for the process of aerobic respiration that powers human cells.

3. What part of the brain is primarily responsible for fine motor skills, balance, and coordination?

A. Cerebrum

B. Cerebellum

C. Brainstem

D. Medulla Oblongata

The cerebellum is primarily responsible for fine motor skills, balance, and coordination. This part of the brain is located at the back of the skull and plays a critical role in processing information from the sensory systems, the spinal cord, and other parts of the brain. It helps ensure smooth and precise movements by integrating sensory input and coordinating muscle action. The cerebellum fine-tunes motor activity, allowing for tasks that require dexterity, such as writing or playing an instrument, to be performed efficiently. Additionally, the cerebellum is essential for maintaining posture and balance, adjusting movements as necessary based on feedback from the environment and the body's position. This function is crucial for activities that require stability, such as walking or standing on one leg. Overall, the cerebellum's ability to process and coordinate motor functions makes it fundamental for both everyday activities and complex movements.

4. What organ is primarily responsible for regulating blood sugar levels?

A. Liver

B. Pancreas

C. Kidney

D. Heart

The pancreas plays a crucial role in regulating blood sugar levels through the production and secretion of hormones, particularly insulin and glucagon. When blood sugar levels rise after eating, the pancreas releases insulin, which facilitates the uptake of glucose by cells for energy or storage, thereby lowering blood sugar levels. Conversely, when blood sugar levels drop, the pancreas releases glucagon, which signals the liver to release stored glucose back into the bloodstream, raising blood sugar levels to maintain homeostasis. This regulatory function is vital for maintaining healthy blood sugar levels, as imbalances can lead to conditions such as hypoglycemia or hyperglycemia. The liver, while also important in metabolism and glucose storage, acts primarily in response to signals from the pancreas rather than independently regulating blood sugar levels. The kidney and heart do not have a direct regulatory role over blood sugar, as their primary functions are related to filtration and circulation, respectively.

5. Which compounds contain nitrogen and oxygen and are important for plant growth?

- A. Nitrites
- B. Nitrates**
- C. Phosphates
- D. Sulfates

Nitrates are important compounds for plant growth because they provide a readily available source of nitrogen, which is an essential nutrient for plants. Nitrogen is a critical component of amino acids, proteins, and nucleic acids, all of which are vital for plant development and functioning. In the soil, nitrates can be taken up by plant roots and are used to synthesize key biomolecules that contribute to growth and energy production. The presence of nitrogen in the nitrate form is particularly advantageous for plants as it supports processes such as photosynthesis and overall metabolic activity. Other compounds, such as nitrites, represent an intermediate stage in the nitrogen cycle but are not as readily utilized by plants as nitrates. Phosphates and sulfates, while important, do not contain nitrogen and thus serve different roles in plant nutrition and growth. Phosphates primarily contribute to energy transfer and genetic material, while sulfates are necessary for certain amino acids and enzyme functions. However, neither directly provides the nitrogen that is crucial for the growth-promoting aspects that nitrates do.

6. What is the basic unit of all forms of life?

- A. Cell**
- B. Organ
- C. Tissue
- D. Atom

The basic unit of all forms of life is the cell. Cells are the smallest structural and functional units of living organisms, meaning they are the fundamental building blocks that make up all life forms, from single-celled organisms like bacteria to complex multicellular organisms like plants and animals. Cells perform essential functions such as metabolism, energy production, and reproduction, which are vital for the organism's survival and overall functionality. Each cell contains the necessary genetic information and machinery to carry out these processes, which contributes to the overall operation and development of the organism. In contrast, while organs are made up of tissues and tissues are composed of cells, they cannot be considered the basic unit of life. An atom, on the other hand, represents the smallest unit of a chemical element and, although essential to the formation of cells, does not itself possess the characteristics associated with life. Thus, recognizing that the cell is the fundamental unit is crucial for understanding biological organization and the complexity of living systems.

7. What term refers to the movement of carbon from the nonliving environment into living things and back?

A. Photosynthesis

B. Carbon Cycle

C. Nitrogen Cycle

D. Hydrological Cycle

The term that refers to the movement of carbon from the nonliving environment into living things and back is the Carbon Cycle. This process involves a series of steps that encompass the transformation and exchange of carbon among the atmosphere, oceans, soil, and living organisms. In the carbon cycle, carbon dioxide is absorbed by plants during photosynthesis, allowing them to convert carbon into organic matter. These plants are then consumed by animals, which incorporate carbon into their bodies. When living organisms die and decompose, carbon is released back into the soil and atmosphere, completing the cycle. This movement is fundamental to maintaining the balance of carbon in ecosystems and is critical for the health of our planet, influencing climate, and supporting life. In contrast, the other options refer to different biological and chemical cycles. Photosynthesis specifically describes the process by which plants capture sunlight to produce energy and organic matter but does not encompass the entire journey of carbon. The Nitrogen Cycle focuses on the transformation of nitrogen in various forms in ecosystems, while the Hydrological Cycle relates to the movement of water through different states and locations on Earth.

8. What is the primary goal of organized community efforts in health?

A. To diagnose diseases

B. To prevent disease and promote health

C. To provide treatment for existing conditions

D. To increase hospital capacities

The primary goal of organized community efforts in health is to prevent disease and promote health. This focus encompasses a wide range of activities aimed at enhancing the well-being of community members through education, resources, and access to health services. By emphasizing prevention and health promotion, these initiatives work to reduce the incidence of diseases, improve quality of life, and foster healthier lifestyles among individuals. Efforts to prevent disease may include vaccination programs, health screenings, community education about healthy behaviors, and initiatives to address social determinants of health, such as access to nutritious food and safe environments. Promoting health involves strategies that encourage active participation in personal and community health, empowering people to take responsibility for their wellness. In contrast, the other options focus more on reactive measures rather than proactive health management. Diagnosing diseases and providing treatment for existing conditions are crucial aspects of healthcare but do not primarily focus on prevention. Similarly, increasing hospital capacities is important for handling health crises but does not directly address the overarching aim of preventing diseases and promoting overall health in the community.

9. Which organisms are responsible for breaking down the dead remains of other organisms?

- A. Consumers**
- B. Producers**
- C. Decomposers**
- D. Carnivores**

Decomposers play a crucial role in the ecosystem by breaking down organic matter, specifically the dead remains of plants and animals. This process of decomposition is vital for nutrient cycling, as it allows essential nutrients to be recycled back into the soil, making them available for producers like plants to use for growth. Decomposers, which include organisms such as fungi, bacteria, and some insects, thrive on organic materials and facilitate the breakdown of complex substances into simpler compounds. This not only cleans up the environment by removing waste but also supports overall ecosystem health by maintaining soil fertility and supporting primary production. In contrast, consumers refer to organisms that consume other organisms for energy, while producers are organisms like plants that create their own food through photosynthesis. Carnivores are a specific type of consumer that primarily eat other animals. These roles are distinct from that of decomposers, highlighting the unique and indispensable function they serve in the biological community.

10. What are inorganic nutrients that help regulate many chemical reactions in the body known as?

- A. Vitamins**
- B. Minerals**
- C. Electrolytes**
- D. Sugars**

Inorganic nutrients that play a crucial role in regulating numerous chemical reactions in the body are known as minerals. These substances, which include elements like calcium, potassium, and iron, are essential for various physiological processes, including building strong bones, transmitting nerve impulses, and maintaining fluid balance. Unlike organic nutrients such as vitamins, which contain carbon, minerals are inorganic and cannot be broken down by heat, air, or acid. Their presence in the body directly influences metabolic pathways, ensuring that functions such as enzyme activity and muscle contraction proceed smoothly. While electrolytes are a subset of minerals that specifically help maintain electrical balance and fluid levels in the body, the broader category that encompasses all inorganic nutrients required for chemical reactions is indeed minerals. Vitamins and sugars, while important for health, do not fall under the category of inorganic nutrients. Hence, the correct identification of minerals highlights their vital function in sustaining life through chemical regulation and metabolic support.

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://hisetscience.examzify.com>

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

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