

LIVING ENVIRONMENT REGENTS 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. Which is a possible reason why the vegetarian finch and cactus finch probably do not inhabit the same area?**
 - A. They are the same species
 - B. Both species require the same food sources
 - C. Their food sources do not occur in the same locations
 - D. They cannot adapt to different environmental conditions

- 2. What is the primary function of the respiratory system?**
 - A. To circulate blood throughout the body
 - B. To break down food into nutrients
 - C. To exchange gases (oxygen and carbon dioxide) with the environment
 - D. To regulate body temperature

- 3. What is the primary role of controlled fires in nature preserves?**
 - A. They promote the growth of invasive species
 - B. They interfere with the process of ecological succession
 - C. They eliminate all plant populations
 - D. They increase biodiversity by introducing foreign species

- 4. What happens to the nitrogen found in our bodies' muscle and organ tissue?**
 - A. It originates significantly from food sources
 - B. It is produced by body cells
 - C. It comes from fertilizer factories
 - D. It is synthesized from sunlight

- 5. What effect do warmer falls have on the survival of winter ticks?**
 - A. Decrease their reproductive rates
 - B. Increase their chances of surviving and infesting moose
 - C. Eliminate their food supply
 - D. Reduce their activity levels

- 6. What could be a possible effect on human populations if nitrogen fertilizers were not available?**
- A. The population would flourish
 - B. The population would decrease
 - C. The population would become more diverse
 - D. The population would stabilize
- 7. Why are amino acids vital for complex organisms?**
- A. They provide energy directly
 - B. They form hormones solely
 - C. They serve as the building blocks of proteins
 - D. They create DNA components
- 8. What adaptation might lead to increased survival rates within a species over time?**
- A. Ignorance of environmental changes
 - B. Ability to produce more offspring
 - C. Development of larger populations
 - D. Inheriting favorable traits
- 9. Why might a mother not get sick from measles after being close to her infected child?**
- A. The mother is planning to get vaccinated soon.
 - B. The mother had been vaccinated against measles.
 - C. The mother has never been tested for measles immunity.
 - D. The mother was not in the same room as the child.
- 10. What structure's number is increased in brain cells of rats during treadmill training, according to research?**
- A. Nuclei
 - B. Ribosomes
 - C. Mitochondria
 - D. Endoplasmic reticulum

Answers

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

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Explanations

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1. Which is a possible reason why the vegetarian finch and cactus finch probably do not inhabit the same area?

- A. They are the same species
- B. Both species require the same food sources
- C. Their food sources do not occur in the same locations**
- D. They cannot adapt to different environmental conditions

The vegetarian finch and cactus finch likely do not inhabit the same area primarily due to differences in their food sources and the locations where those food sources are found. Each finch is adapted to utilize specific types of food. The vegetarian finch typically feeds on fruits, seeds, and flowers, while the cactus finch is more specialized in consuming cactus nectar and pads. These distinct dietary preferences mean that their food sources do not overlap significantly, leading to competition for the same resources if they were to inhabit the same area. By occupying different ecological niches, these finches reduce competition and can thrive in environments that best suit their feeding habits. This concept is fundamental in ecology and explains how different species can coexist without directly competing for the same available resources in a given habitat.

2. What is the primary function of the respiratory system?

- A. To circulate blood throughout the body
- B. To break down food into nutrients
- C. To exchange gases (oxygen and carbon dioxide) with the environment**
- D. To regulate body temperature

The primary function of the respiratory system is to exchange gases, specifically oxygen and carbon dioxide, with the environment. This process is essential for life, as it allows the body to take in oxygen, which is necessary for cellular respiration, and to expel carbon dioxide, a waste product of metabolism. The respiratory system comprises organs such as the lungs, trachea, and bronchi, which facilitate this gas exchange efficiently through inhalation and exhalation. While the circulatory system is responsible for circulating blood (which relates more closely to one of the incorrect options), the digestive system is tasked with breaking down food into nutrients, not the respiratory system. Additionally, while the regulation of body temperature is important for overall homeostasis, it is primarily managed by the integumentary system (skin, sweat glands) and does not fall under the main roles of the respiratory system. Hence, gas exchange is the key function that distinguishes the respiratory system from other systems in the body.

3. What is the primary role of controlled fires in nature preserves?

- A. They promote the growth of invasive species
- B. They interfere with the process of ecological succession**
- C. They eliminate all plant populations
- D. They increase biodiversity by introducing foreign species

The primary role of controlled fires in nature preserves is to promote the health of ecosystems and support ecological succession rather than interfere with it. Controlled burns can help manage landscapes by removing dead biomass and reducing the risk of uncontrolled wildfires. Through the process of burning, certain plant species that are fire-adapted may thrive, allowing them to compete more effectively in the ecosystem. This can lead to increased biodiversity, as various plant and animal species can coexist when their habitats are maintained through regular fires. Furthermore, these fires can stimulate the growth of native plants that require fire for germination or for rejuvenation, thus encouraging a balanced ecological succession. In contrast, the other options suggest negative impacts of fire that do not accurately reflect the ecological benefits provided by controlled burns. For example, promoting invasive species, completely eliminating plant populations, or introducing foreign species does not align with the natural role of fire in maintaining the health of the ecosystems.

4. What happens to the nitrogen found in our bodies' muscle and organ tissue?

- A. It originates significantly from food sources
- B. It is produced by body cells
- C. It comes from fertilizer factories**
- D. It is synthesized from sunlight

The nitrogen found in our bodies' muscle and organ tissue primarily originates from food sources, specifically proteins. When we consume protein, our bodies break it down into amino acids, which contain nitrogen. This nitrogen is then used to build and repair tissues, synthesize hormones, and produce various biomolecules essential for bodily functions. The option that nitrogen comes from fertilizer factories relates to agricultural practices, where nitrogen is used to enhance plant growth. While fertilizers contribute to the nitrogen content in food crops, this is not the direct source of nitrogen in human muscle and organ tissue. Instead, the nitrogen incorporated in our bodies stems from the food we consume rather than direct absorption from fertilizers or their byproducts. Understanding the correct source of nitrogen is crucial in comprehending nutrition and metabolism, especially in how dietary intake affects bodily functions.

5. What effect do warmer falls have on the survival of winter ticks?

- A. Decrease their reproductive rates
- B. Increase their chances of surviving and infesting moose**
- C. Eliminate their food supply
- D. Reduce their activity levels

Warmer fall temperatures can significantly impact the survival and behavior of winter ticks. The correct answer indicates that these warmer conditions increase the chances of ticks surviving and successfully infesting moose, which are important hosts for them. As temperatures rise, the winter ticks have extended opportunities to attach to moose before winter fully sets in. Typically, ticks benefit from milder weather because it allows them to remain active for longer periods. This increased activity can lead to higher rates of feeding and, consequently, a greater likelihood of survival over the winter months when temperatures traditionally drop. In addition, warmer conditions may enable ticks to develop and reproduce more effectively, as their life cycles are closely tied to environmental temperatures. When conditions are favorable, ticks can proliferate more readily, leading to larger infestations on their host animals. This dynamic illustrates a direct connection between climate change and the survival strategies of ectoparasites like winter ticks, emphasizing the biological and ecological implications of rising temperatures on wildlife.

6. What could be a possible effect on human populations if nitrogen fertilizers were not available?

- A. The population would flourish
- B. The population would decrease**
- C. The population would become more diverse
- D. The population would stabilize

If nitrogen fertilizers were not available, one significant effect on human populations could be a decrease in population numbers. Nitrogen is a key nutrient for plants, and its availability directly affects agricultural productivity. Without sufficient nitrogen, crop yields would likely decline, leading to reduced food production. As food supplies dwindle, this could result in malnutrition or starvation in human populations that heavily depend on agriculture for sustenance. Lower food availability could also lead to higher food prices, economic strain, and potential societal unrest. In such scenarios, not only would immediate impacts on health and food security be evident, but there would also be ripple effects on population dynamics, where a lack of food resources could result in decreased birth rates or increased mortality rates. This reasoning aligns with the understanding that food security is critical for maintaining population numbers. A decrease in population due to insufficient nutrition and resources reflects the core relationship between agricultural practices and human health and sustainability.

7. Why are amino acids vital for complex organisms?

- A. They provide energy directly
- B. They form hormones solely
- C. They serve as the building blocks of proteins**
- D. They create DNA components

Amino acids are vital for complex organisms because they serve as the building blocks of proteins. Proteins perform a wide variety of functions crucial for the survival and proper functioning of cells and organisms. They are involved in structural roles (like collagen in connective tissues), enzymatic functions (catalyzing biochemical reactions), transport mechanisms (such as hemoglobin carrying oxygen), immune responses (antibodies), and regulation (hormones and signaling molecules). The sequence and arrangement of amino acids in a protein determine its structure and function, making amino acids essential for the overall health and functionality of living organisms. While proteins provide energy under certain circumstances, their primary role is not energy provision, and amino acids do not solely form hormones, nor do they create components of DNA. Instead, they must be combined in specific sequences to form the various proteins that carry out these crucial roles in the body.

8. What adaptation might lead to increased survival rates within a species over time?

- A. Ignorance of environmental changes
- B. Ability to produce more offspring
- C. Development of larger populations

D. Inheriting favorable traits

The adaptation that might lead to increased survival rates within a species over time is the inheritance of favorable traits. This concept is a fundamental principle of evolution, particularly as described by natural selection. When individuals within a species possess traits that give them an advantage in their environment—such as better camouflage, faster speed, or increased resistance to diseases—they are more likely to survive and reproduce. As these advantageous traits are passed on to the next generation, the overall characteristics of the species may shift positively, leading to improved survival rates over time. The ability to produce more offspring, while beneficial, does not inherently ensure that those offspring will survive or possess advantageous traits. Similarly, the development of larger populations does not guarantee increased survival, as larger groups can also face competition for resources, disease spread, and environmental changes. Ignorance of environmental changes can lead to decreased survival rates, as organisms that cannot adapt to new conditions may struggle or perish. Therefore, inheriting favorable traits specifically addresses the mechanism by which successful adaptations are achieved over generations.

9. Why might a mother not get sick from measles after being close to her infected child?

- A. The mother is planning to get vaccinated soon.
- B. The mother had been vaccinated against measles.**
- C. The mother has never been tested for measles immunity.
- D. The mother was not in the same room as the child.

The correct answer highlights that the mother had been vaccinated against measles, which provides her with immunity to the virus. Vaccination stimulates the immune system to produce antibodies that can recognize and fight off the measles virus if the individual is exposed. Because measles is highly contagious, being close to an infected person increases the likelihood of contracting the disease. However, if the mother has been vaccinated, her immune system is prepared to combat the virus, protecting her from falling ill despite the exposure. This immunity can also stem from having had measles previously, as recovering from the infection typically confers lifelong immunity. In this context, the mother's vaccination status plays a critical role in her health, even in close proximity to an infected individual. The other options do not provide a valid reason for her not getting sick; for example, planning to get vaccinated soon would not confer immediate protection, and being untested does not imply immunity. Similarly, not being present in the same room implies separation, which would not apply if they were indeed close together.

10. What structure's number is increased in brain cells of rats during treadmill training, according to research?

- A. Nuclei
- B. Ribosomes
- C. Mitochondria**
- D. Endoplasmic reticulum

The increase in the number of mitochondria in brain cells of rats during treadmill training highlights the relationship between physical exercise and cellular adaptation. Mitochondria are known as the powerhouses of the cell because they are responsible for producing ATP, the energy currency of the cell. When animals engage in regular physical activity, such as treadmill training, their energy demands increase, prompting cells, including those in the brain, to enhance their capacity for energy production. This adaptation allows the brain to better support various functions, especially those that require high energy levels, such as maintaining neuronal health, promoting neurogenesis, and supporting synaptic plasticity. The increase in mitochondrial density can lead to improved overall brain function and better cognitive performance. Therefore, the correct response focuses on the significance of mitochondria in energy production and their adaptive response to exercise.

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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:

<https://regents-livingenvironment.examzify.com>

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

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