

CITY AND GUILDS ANIMAL MANAGEMENT LEVEL 3 BIOLOGICAL SYSTEMS PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE**

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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 happens to hair muscles when body temperature drops?**
 - A. They relax and the hair lies flat
 - B. They contract and hair stands on end
 - C. They remain unaffected
 - D. They become less sensitive
- 2. Which respiratory structure allows for gas exchange in amphibians?**
 - A. Gills
 - B. Skin
 - C. Lungs
 - D. All of the above
- 3. What is the function of the liver in maintaining homeostasis?**
 - A. Regulating blood water concentration
 - B. Controlling blood glucose levels
 - C. Producing digestive enzymes
 - D. Filtering out toxins
- 4. Which statement accurately describes a reflex response?**
 - A. The brain is heavily involved in the response
 - B. The sensory neuron sends a message directly to the brain
 - C. The nervous pathway is known as a reflex arc
 - D. The motor neuron bypasses the sensory neuron
- 5. What is the role of the larynx?**
 - A. As a passage for food only
 - B. As a voice box and air passage
 - C. As a filter for air
 - D. As an organ for gas exchange
- 6. What is the function of the synapse in a neuron?**
 - A. To detect stimuli
 - B. To connect two neurons
 - C. To carry nerve impulses
 - D. To process information

7. What does the axial skeleton primarily protect?

- A. Muscles
- B. Skin
- C. Internal organs
- D. Joints

8. What does the reticular formation primarily influence?

- A. Emotion regulation
- B. Motor control
- C. Cognitive functions like decision making
- D. Waking and consciousness

9. Which structure is essential for gas exchange in fish?

- A. Bronchi
- B. Lungs
- C. Gills
- D. Trachea

10. What is the main function of the appendicular skeleton?

- A. To protect internal organs
- B. To allow body movement
- C. To support the spine
- D. To produce blood cells

Answers

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

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Explanations

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1. What happens to hair muscles when body temperature drops?

- A. They relax and the hair lies flat
- B. They contract and hair stands on end**
- C. They remain unaffected
- D. They become less sensitive

When body temperature drops, the hair muscles, also known as arrector pili muscles, contract. This contraction causes the hair follicles to pull the hair upright, resulting in the hair standing on end. This physiological response is part of the body's mechanisms to conserve heat. By raising the hair, a layer of insulation is created, which helps to trap air and retain body warmth. Additionally, this reaction can make the animal appear larger and more intimidating to potential threats. This response is more pronounced in animals with fur as opposed to those with little or no body hair.

2. Which respiratory structure allows for gas exchange in amphibians?

- A. Gills
- B. Skin
- C. Lungs
- D. All of the above**

In amphibians, gas exchange occurs through multiple structures, which is unique compared to other animal groups. This adaptability allows them to thrive both in aquatic and terrestrial environments. Gills are primarily used for breathing in the larval stage of amphibians, enabling them to extract oxygen from water. As they undergo metamorphosis, many amphibians develop lungs, which facilitate breathing when they are on land. Additionally, amphibians possess permeable skin that serves as a significant respiratory surface. Their skin is richly supplied with blood vessels, allowing for the diffusion of oxygen and carbon dioxide directly between the air and the bloodstream. This skin respiration is particularly important in moist environments, where it enhances their ability to draw in oxygen without relying solely on lungs or gills. Thus, the correct answer encompasses all these structures—gills, skin, and lungs—as they all play critical roles at different life stages and environments, underscoring the remarkable versatility of amphibian respiratory systems.

3. What is the function of the liver in maintaining homeostasis?

- A. Regulating blood water concentration
- B. Controlling blood glucose levels**
- C. Producing digestive enzymes
- D. Filtering out toxins

The liver plays a crucial role in maintaining homeostasis, particularly through the regulation of blood glucose levels. It performs this function by storing glucose as glycogen when blood glucose levels are high and releasing glucose back into the bloodstream when levels drop. This balancing act ensures that the body has a stable supply of energy and helps to prevent fluctuations that could lead to conditions such as hypoglycemia or hyperglycemia. While the liver does have other important functions, such as filtering toxins and contributing to digestion by producing bile, its central role in glucose homeostasis is vital for overall metabolic regulation. By adjusting the amount of glucose released or absorbed, the liver helps maintain the balance necessary for various bodily systems to operate effectively.

4. Which statement accurately describes a reflex response?

- A. The brain is heavily involved in the response
- B. The sensory neuron sends a message directly to the brain
- C. The nervous pathway is known as a reflex arc**
- D. The motor neuron bypasses the sensory neuron

A reflex response is characterized primarily by the involvement of a reflex arc. This is a neural pathway that mediates a reflex action, allowing the body to respond rapidly to stimuli without the need for conscious thought or involvement of higher brain centers. In a typical reflex arc, the sensory neuron detects a stimulus and sends a signal directly to the spinal cord. From there, a motor neuron is activated, leading to an immediate response, often involving a muscle contraction. This process happens swiftly, minimizing the time taken for a reaction, which is crucial in situations where rapid responses are necessary for survival, such as pulling a hand away from a hot surface. The other options suggest a more complex interaction involving the brain or alternative pathways, which are not characteristic of reflex responses. For example, stating that the brain is heavily involved implies a delay in the process, while a reflex response is designed to be immediate. Similarly, the notion that the sensory neuron sends a message directly to the brain overlooks the role of the spinal cord in facilitating the reflex action. Lastly, claiming that the motor neuron bypasses the sensory neuron misrepresents the sequence of activation in a reflex arc, where the sensory neuron plays a crucial role in sensing the stimulus.

5. What is the role of the larynx?

- A. As a passage for food only
- B. As a voice box and air passage**
- C. As a filter for air
- D. As an organ for gas exchange

The larynx plays a crucial role in the respiratory system as both a voice box and an air passage. It is located at the top of the trachea and serves multiple functions, including the production of sound through the vibration of the vocal cords, which are located within the larynx. When air passes through this structure, it causes the vocal cords to vibrate, enabling speech and other vocalizations. In addition to its function in sound production, the larynx also serves as a passageway for air, directing it from the pharynx to the trachea and into the lungs. This portion of the airways helps to ensure that air travels properly during breathing. The larynx is also equipped with protective mechanisms such as the epiglottis, which prevents food and liquids from entering the airway during swallowing, thus maintaining a clear passage for air. While components involved in filtering air or gas exchange are important in the respiratory system, these functions are primarily handled by other structures, such as the nasal passages and alveoli within the lungs. Therefore, the recognition of the larynx's dual role as both a producer of sound and an air passage highlights its significance in both communication and respiration.

6. What is the function of the synapse in a neuron?

- A. To detect stimuli
- B. To connect two neurons**
- C. To carry nerve impulses
- D. To process information

The function of the synapse in a neuron is to connect two neurons. A synapse is a specialized junction where communication occurs between the axon terminal of one neuron and the dendrites or cell body of another neuron. This connection allows for the transmission of signals through chemical or electrical means, facilitating the movement of information throughout the nervous system. In this junction, neurotransmitters are released from the presynaptic neuron and bind to receptors on the postsynaptic neuron. This process is crucial for the propagation of nerve impulses, as it enables one neuron to influence the activity of another and contributes to the overall functioning of neural circuits, thereby playing a key role in processes such as reflex actions, muscle movement, and sensory perception.

7. What does the axial skeleton primarily protect?

- A. Muscles
- B. Skin
- C. Internal organs**
- D. Joints

The axial skeleton primarily protects the internal organs by providing a stable structure for the body. This part of the skeleton includes the skull, vertebral column, and rib cage, which play critical roles in shielding vital organs. For instance, the skull safeguards the brain, the rib cage protects the heart and lungs, and the vertebral column encases the spinal cord. Each of these components is essential for maintaining the integrity and function of the organs they protect, ensuring that the body's systems operate efficiently. Understanding the roles of the axial skeleton in this protective capacity is crucial in animal management, as it relates to the health and well-being of the animals under care.

8. What does the reticular formation primarily influence?

- A. Emotion regulation
- B. Motor control
- C. Cognitive functions like decision making
- D. Waking and consciousness**

The reticular formation primarily influences waking and consciousness because it is a network of neurons located in the brainstem that plays a crucial role in regulating arousal levels and sleep-wake cycles. It acts as a filter for sensory information, allowing the brain to prioritize what is important for attention and awareness. This neural network sends signals to various parts of the brain and helps coordinate the levels of alertness. When the reticular formation is activated, it promotes wakefulness and alertness, whereas inhibition of this area can result in sleep or reduced consciousness. In understanding the role of the reticular formation, it's important to note that while it does have connections that can affect motor control and some cognitive functions, such as attention to incoming stimuli, its primary and most critical influence is on states of wakefulness and consciousness.

9. Which structure is essential for gas exchange in fish?

- A. Bronchi
- B. Lungs
- C. Gills**
- D. Trachea

The structure that is essential for gas exchange in fish is gills. Gills are specialized organs that allow fish to extract oxygen from water as it flows over them. This process occurs when water enters the fish's mouth, passes over the gill membranes, and exits through gill openings. The thin walls of the gills, combined with their large surface area and rich blood supply, facilitate the efficient transfer of oxygen into the fish's bloodstream while also allowing carbon dioxide to be released from the blood into the water. In contrast, lungs are the primary respiratory structures in terrestrial animals, not suited for aquatic environments like those in which fish live. Similarly, bronchi and trachea are parts of the respiratory system in mammals and are designed for air breathing, facilitating gas exchange with the atmosphere rather than with water. Thus, gills are uniquely adapted to meet the respiratory needs of fish, enabling them to thrive in their aquatic habitats.

10. What is the main function of the appendicular skeleton?

- A. To protect internal organs
- B. To allow body movement**
- C. To support the spine
- D. To produce blood cells

The main function of the appendicular skeleton is to allow body movement. This part of the skeleton includes the limbs and the pelvic and shoulder girdles, which facilitate a wide range of motions essential for locomotion and manipulation of the environment. The structure of the appendicular skeleton, with its joints and limbs, is specifically designed to enable various movements such as walking, running, lifting, and grasping. By contrast, other skeletal functions, such as protecting internal organs, supporting the spine, or producing blood cells, are primarily related to the axial skeleton or locations in the body more associated with those tasks. For instance, the axial skeleton is mainly involved in protecting the brain, heart, and lungs, while blood cell production takes place in bone marrow, which is more prevalent in certain bones throughout both the appendicular and axial skeletons.

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:

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

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