

HOSA ANATOMY AND PHYSIOLOGY ASSESSMENT 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 action occurs at the synapse when a nerve impulse reaches the end of an axon?**
 - A. Neurotransmitter release
 - B. Reuptake of neurotransmitters
 - C. Activation of calcium channels
 - D. Generates an action potential
- 2. How many lobes are there in the human lung?**
 - A. 3 lobes
 - B. 4 lobes
 - C. 5 lobes
 - D. 6 lobes
- 3. Which part of the brain is associated with balance and coordination?**
 - A. Cerebrum
 - B. Pons
 - C. Cerebellum
 - D. Medulla oblongata
- 4. What structure connects muscles to bones?**
 - A. Ligaments
 - B. Tendons
 - C. Cartilage
 - D. Fascia
- 5. What type of joint is found in the elbow?**
 - A. Ball and socket joint
 - B. Pivot joint
 - C. Hinge joint
 - D. Gliding joint
- 6. What is located at the base of the hair follicle?**
 - A. Hair Shaft
 - B. Hair Bulb
 - C. Hair Root
 - D. Hair Follicle

- 7. What term refers to the breakdown of substances, formation of new products, or energy transfer between substances?**
- A. Metabolism
 - B. Catabolism
 - C. Homeostasis
 - D. Oxidation
- 8. What term describes the study of how the nervous system functions?**
- A. Neurophysiology
 - B. Histology
 - C. Cytology
 - D. Physiology
- 9. What is the primary function of the skeletal system?**
- A. To produce hormones
 - B. To provide energy for movement
 - C. To provide support and protection to the body
 - D. To regulate body temperature
- 10. What is the primary function of the endocrine system?**
- A. To protect the body and regulate temperature
 - B. To provide structural support to the body
 - C. To regulate bodily functions through hormones
 - D. To transport nutrients and waste in the blood

Answers

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

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Explanations

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1. What action occurs at the synapse when a nerve impulse reaches the end of an axon?

- A. Neurotransmitter release**
- B. Reuptake of neurotransmitters
- C. Activation of calcium channels
- D. Generates an action potential

When a nerve impulse reaches the end of an axon, the action that occurs is the release of neurotransmitters. This is a crucial event in communication between neurons. The arrival of the nerve impulse triggers a change in the electrical state of the presynaptic neuron, which leads to the opening of voltage-gated calcium channels. Calcium ions then flow into the neuron, facilitating the fusion of synaptic vesicles with the presynaptic membrane, resulting in the release of neurotransmitters into the synaptic cleft. The release of these neurotransmitters allows them to bind to receptors on the postsynaptic neuron, carrying the signal forward and potentially generating a new nerve impulse in that neuron. This process is essential for transmitting signals across synapses, making neurotransmitter release a fundamental action in neuronal communication.

2. How many lobes are there in the human lung?

- A. 3 lobes
- B. 4 lobes
- C. 5 lobes**
- D. 6 lobes

The human lungs consist of a total of five lobes, divided into the left and right lungs. The right lung has three lobes: the upper, middle, and lower lobes, while the left lung has two lobes: the upper and lower lobes. This structural arrangement allows for efficient gas exchange and fits the anatomical design, as the left lung is slightly smaller to accommodate the heart. Understanding the division of the lungs into lobes is essential in anatomy and physiology, as it relates to how respiratory diseases may impact lung function and health.

3. Which part of the brain is associated with balance and coordination?

- A. Cerebrum
- B. Pons
- C. Cerebellum**
- D. Medulla oblongata

The cerebellum is the part of the brain that is primarily responsible for balance and coordination. It is located at the back of the brain, beneath the cerebrum. The cerebellum integrates sensory information from the spinal cord and other parts of the brain to fine-tune motor commands, helping to maintain posture and coordinate voluntary movements. It plays a crucial role in ensuring smooth and balanced actions, which is vital for activities such as walking, running, and any precise movements requiring motor control. In contrast, the cerebrum is responsible for higher brain functions such as reasoning, emotions, and sensory processing. The pons acts as a bridge between different parts of the nervous system, including relay signals to the cerebellum but does not directly control balance and coordination itself. The medulla oblongata manages autonomic functions like breathing and heart rate but is not involved in motor coordination. Thus, the cerebellum is the key player in maintaining our balance and ensuring our movements are smooth and coordinated.

4. What structure connects muscles to bones?

- A. Ligaments
- B. Tendons**
- C. Cartilage
- D. Fascia

The structure that connects muscles to bones is tendons. Tendons are strong, flexible bands of connective tissue that transmit the force generated by muscles to the bones, enabling movement at joints. This connection is crucial for all controlled movements, such as walking, running, and lifting. Tendons also play a role in stabilizing joints during muscle contractions. In contrast, ligaments connect bones to other bones, providing stability to joints; cartilage serves as a cushion between bones in a joint and helps reduce friction during movement; and fascia is a layer of connective tissue that surrounds muscles, groups of muscles, and other structures, providing support and protection but does not connect muscles to bones. Understanding the distinct roles of these structures helps clarify their functions within the musculoskeletal system.

5. What type of joint is found in the elbow?

- A. Ball and socket joint
- B. Pivot joint
- C. Hinge joint**
- D. Gliding joint

The elbow is classified as a hinge joint, which is characterized by its ability to allow movement primarily in one plane, much like the action of a door swinging open and shut. In the case of the elbow, the joint permits flexion and extension, enabling the forearm to move towards and away from the upper arm. This type of joint structure allows for a stable and efficient range of motion necessary for various activities, such as lifting and carrying objects. Hinge joints, such as the elbow, have a very specific alignment of the articulating surfaces, which prevents lateral movement and enhances stability. This structural design is critical for the heavy usage of the elbow in daily activities and sports. Understanding the function and type of joint in the elbow is fundamental when studying human anatomy, as it highlights the relationship between joint structure and movement capabilities.

6. What is located at the base of the hair follicle?

- A. Hair Shaft
- B. Hair Bulb**
- C. Hair Root
- D. Hair Follicle

The hair bulb is located at the base of the hair follicle and plays a crucial role in hair growth. It is an expanded structure that houses the cells responsible for producing hair, known as keratinocytes. These cells divide and differentiate, contributing to the formation of the hair shaft that eventually grows out of the follicle. Additionally, the hair bulb contains melanin-producing cells, which give hair its color. The presence of blood vessels in the bulb also provides nutrients necessary for hair growth. The hair shaft is the visible part of the hair that projects above the skin. The hair root refers to the part of the hair that is anchored in the follicle but does not encompass the bulb itself. The hair follicle is the structure that surrounds the entire hair root and bulb, providing support and protection but is not specifically at the base of the follicle. Understanding the function and structure of the hair bulb is essential for comprehending how hair growth occurs and the biological processes involved.

7. What term refers to the breakdown of substances, formation of new products, or energy transfer between substances?

A. Metabolism

B. Catabolism

C. Homeostasis

D. Oxidation

Metabolism is the comprehensive term that encompasses all chemical reactions occurring within an organism, including both the breakdown of substances and the formation of new products. It is a broad concept that incorporates various processes that convert food into energy, eliminate waste products, and synthesize important biomolecules necessary for growth and repair. In metabolism, energy transfer is a crucial aspect, as it involves the transformation of energy from one form to another during these reactions. Both catabolism and anabolism (the synthesis of compounds) fall under the umbrella of metabolism. Catabolism specifically highlights the breakdown processes where larger molecules are decomposed into smaller ones, often releasing energy in the process. Homeostasis relates to maintaining a stable internal environment but does not directly refer to the chemical reactions that occur within the body. Oxidation is a specific type of reaction that involves the loss of electrons and can be a part of metabolic processes, but it does not cover all aspects of metabolism. Thus, metabolism is the most suitable term that captures the complete range of chemical reactions occurring in biological systems.

8. What term describes the study of how the nervous system functions?

A. Neurophysiology

B. Histology

C. Cytology

D. Physiology

The study of how the nervous system functions is referred to as neurophysiology. This specialized branch of physiology focuses on the characteristics and operations of nerve cells and neural circuits, exploring how signals are transmitted throughout the nervous system. Neurophysiology incorporates various aspects of both anatomy and physiology to understand how the nervous system processes information, regulates bodily functions, and interacts with other systems. Histology, on the other hand, deals with the study of tissues at a microscopic level, while cytology focuses on the study of individual cells. Physiology is a broader term that encompasses the study of the functions of all biological systems, not specifically the nervous system. In contrast, neurophysiology's specific concentration on the nervous system's functioning sets it apart as the correct answer in this context.

9. What is the primary function of the skeletal system?

- A. To produce hormones
- B. To provide energy for movement
- C. To provide support and protection to the body**
- D. To regulate body temperature

The primary function of the skeletal system is to provide support and protection to the body. The bones serve as a structural framework that not only supports the body's shape but also protects vital organs, such as the brain, heart, and lungs, from injury. Additionally, the skeletal system plays a critical role in allowing movement by serving as points of attachment for muscles, facilitating leverage when muscles contract. While producing hormones, providing energy for movement, and regulating body temperature are all essential functions in the body, these processes are not the primary roles of the skeletal system. For example, hormone production is primarily the role of endocrine glands, energy for movement is derived from metabolic processes, and body temperature regulation is mainly managed by the integumentary system and the circulatory system. By focusing on support and protection, it becomes evident why this function is central to the skeletal system's purpose in maintaining overall body integrity and function.

10. What is the primary function of the endocrine system?

- A. To protect the body and regulate temperature
- B. To provide structural support to the body
- C. To regulate bodily functions through hormones**
- D. To transport nutrients and waste in the blood

The primary function of the endocrine system is to regulate bodily functions through hormones. This system comprises various glands that secrete hormones directly into the bloodstream, allowing these chemical messengers to travel throughout the body and target specific organs and tissues. Hormones play crucial roles in numerous physiological processes, including metabolism, growth and development, tissue function, and mood regulation. By using the bloodstream for communication, the endocrine system can coordinate complex bodily functions over a longer duration compared to the nervous system, which operates through electrical signals for immediate responses. In contrast, the other functions listed relate to different systems within the body. The role of protecting the body and regulating temperature is primarily served by the integumentary system, which includes the skin and its associated structures. Providing structural support is the main function of the skeletal system, which consists of bones and cartilage. Finally, the transport of nutrients and waste in the blood is primarily the responsibility of the circulatory system, which comprises the heart, blood vessels, and blood itself. Thus, option C accurately describes the unique and essential function of the endocrine system.

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://hosaanatomyandphysiology.examzify.com>

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

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