

PHS 7.1 - Basic Structure of the Human Body Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	16

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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 organ is part of both the digestive system and the endocrine system?**
 - A. Stomach**
 - B. Liver**
 - C. Pancreas**
 - D. Kidney**

- 2. What are the two main types of cells that compose nervous tissue?**
 - A. Red blood cells and platelets**
 - B. Neurons and glial cells**
 - C. Osteocytes and chondrocytes**
 - D. Skeletal and smooth muscle cells**

- 3. Which of the following is NOT a function of the integumentary system?**
 - A. Produces vitamin D**
 - B. Eliminates some wastes**
 - C. Coordinates and controls body activities**
 - D. Protects the body from infection and injury**

- 4. What is the main role of myelin in the nervous system?**
 - A. To transmit signals between neurons**
 - B. To insulate axons and speed up signal transmission**
 - C. To produce neurotransmitters**
 - D. To facilitate muscle movement**

- 5. Which cellular structure is primarily responsible for protein synthesis?**
 - A. Mitochondria**
 - B. Ribosomes**
 - C. Nucleus**
 - D. Lysosomes**

- 6. Which of the following is an example of an organ?**
- A. Ribosomes**
 - B. Heart**
 - C. Nucleus**
 - D. Mitochondria**
- 7. What are molecules composed of?**
- A. A single atom**
 - B. Two or more combined atoms**
 - C. Cells forming the body's structures**
 - D. Complex carbohydrates**
- 8. What type of connective tissue is known as fatty tissue?**
- A. Adipose tissue**
 - B. Fibrous connective tissue**
 - C. Reticular connective tissue**
 - D. Cartilage**
- 9. What is the primary function of the kidneys?**
- A. Produce hormones**
 - B. Filter blood and produce urine**
 - C. Facilitate gas exchange**
 - D. Store nutrients**
- 10. Which system is responsible for maintaining posture?**
- A. Nervous system**
 - B. Skeletal system**
 - C. Muscular system**
 - D. Integumentary system**

Answers

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

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Explanations

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1. Which organ is part of both the digestive system and the endocrine system?

- A. Stomach**
- B. Liver**
- C. Pancreas**
- D. Kidney**

The pancreas is unique because it serves as both an essential organ of the digestive system and plays a critical role in the endocrine system. In the digestive system, the pancreas produces digestive enzymes that are released into the small intestine to help break down food. This enzymatic function is crucial for the proper digestion of carbohydrates, proteins, and fats. Simultaneously, the pancreas also has endocrine functions. It contains clusters of cells known as the islets of Langerhans, which produce hormones such as insulin and glucagon. These hormones are vital for regulating blood sugar levels, making the pancreas integral to glucose metabolism. This dual functionality is what makes the pancreas a unique organ straddling both systems. The other organs listed do not fulfill this dual role; they either serve one system or the other, making the pancreas the correct answer.

2. What are the two main types of cells that compose nervous tissue?

- A. Red blood cells and platelets**
- B. Neurons and glial cells**
- C. Osteocytes and chondrocytes**
- D. Skeletal and smooth muscle cells**

Nervous tissue is primarily composed of two main types of cells: neurons and glial cells. Neurons are the fundamental units of the nervous system, responsible for transmitting signals throughout the body. They have a unique structure that includes a cell body, dendrites, and an axon, allowing them to process and communicate information. Glial cells, on the other hand, serve important supportive roles in the nervous system. They do not conduct impulses like neurons do but provide essential support, protection, and nourishment to neurons. Glial cells include a variety of types such as astrocytes, oligodendrocytes, and microglia, each with specific functions that are critical for maintaining overall nervous system health and function. The other choices mention cells that are unrelated to nervous tissue: red blood cells and platelets pertain to the circulatory system, while osteocytes and chondrocytes are associated with bone and cartilage in the skeletal system, respectively. Skeletal and smooth muscle cells are types of muscle tissue, which has distinct functions separate from those of nervous tissue. Understanding these distinctions reinforces the importance of knowing the specific types of cells that comprise each tissue in the human body.

3. Which of the following is NOT a function of the integumentary system?

- A. Produces vitamin D**
- B. Eliminates some wastes**
- C. Coordinates and controls body activities**
- D. Protects the body from infection and injury**

The integumentary system, which includes the skin, hair, nails, and associated glands, has several important functions that directly relate to the health and maintenance of the body. One key function is the production of vitamin D when skin is exposed to sunlight, which is essential for calcium absorption and overall bone health. Additionally, the integumentary system plays a role in waste elimination. Through sweat, it can help expel small amounts of waste products from the body. The protective functions of the integumentary system are also crucial; the skin acts as a barrier that shields internal organs from injury, pathogens, and harmful substances. In contrast, the function of coordinating and controlling body activities is primarily managed by the nervous system and the endocrine system, not the integumentary system. These systems are responsible for the regulation and coordination of various body functions, ensuring that responses to stimuli are processed and executed effectively. This delineation highlights why the correct response to the question focuses on the coordination and control of body activities as not being a function of the integumentary system.

4. What is the main role of myelin in the nervous system?

- A. To transmit signals between neurons**
- B. To insulate axons and speed up signal transmission**
- C. To produce neurotransmitters**
- D. To facilitate muscle movement**

Myelin serves a crucial function in the nervous system by insulating axons, which are the long, slender projections of neurons. This insulation is essential because it increases the speed at which electrical impulses, known as action potentials, travel along the axon. The presence of myelin allows for a process called saltatory conduction, where the impulse jumps from one node of Ranvier (gaps in the myelin sheath) to another, significantly accelerating signal transmission compared to unmyelinated axons. This insulation is vital for efficient communication within the nervous system, particularly in long-distance signaling, where rapid transmission can lead to quicker reflexes and response times. Different types of cells contribute to myelin formation: in the central nervous system, oligodendrocytes are responsible for producing myelin, while Schwann cells perform this role in the peripheral nervous system. The other options provided represent functions that are not related to myelin. For instance, transmitting signals between neurons is primarily the role of neurotransmitters, which are released from one neuron and received by another. Producing neurotransmitters refers to the role of specific neuronal processes and structures, not myelin itself. Facilitating muscle movement is linked to motor neurons and muscle fibers, and while these are

5. Which cellular structure is primarily responsible for protein synthesis?

- A. Mitochondria**
- B. Ribosomes**
- C. Nucleus**
- D. Lysosomes**

The primary cellular structure responsible for protein synthesis is ribosomes. Ribosomes play a crucial role in translating messenger RNA (mRNA) into polypeptide chains, which ultimately fold into functional proteins. They can be found either floating freely in the cytoplasm or attached to the endoplasmic reticulum, known as the rough ER, where they facilitate the assembly of proteins that are either secreted from the cell or incorporated into cellular membranes. In contrast, mitochondria are known as the powerhouse of the cell, generating ATP through cellular respiration, while the nucleus houses the cell's genetic material and serves as the control center for gene expression. Lysosomes contain enzymes necessary for breaking down waste materials and cellular debris, but they do not play a direct role in synthesizing proteins. Understanding the distinct functions of these cellular structures highlights the specific role of ribosomes in the fundamental process of protein synthesis.

6. Which of the following is an example of an organ?

- A. Ribosomes**
- B. Heart**
- C. Nucleus**
- D. Mitochondria**

The heart is an example of an organ because it is a specialized structure made up of different types of tissues that work together to perform specific functions in the body. In the case of the heart, its primary role is to pump blood throughout the circulatory system, supplying oxygen and nutrients to tissues and removing waste products. An organ is defined as a collection of tissues that work together to carry out a specific task, and the heart fits this definition perfectly, comprising cardiac muscle, connective tissues, and nerve tissues. In contrast, ribosomes, the nucleus, and mitochondria are all examples of organelles, which are substructures within a cell that perform specific functions. Ribosomes play a critical role in protein synthesis, the nucleus houses genetic material, and mitochondria are known as the powerhouses of the cell, generating energy. While these organelles are essential for cellular function, they do not function independently at the level of an organ in the organism's structure.

7. What are molecules composed of?

- A. A single atom
- B. Two or more combined atoms**
- C. Cells forming the body's structures
- D. Complex carbohydrates

Molecules are made up of two or more combined atoms. This fundamental concept in chemistry underscores how atoms, which are the smallest units of an element, can bond together in various configurations to form molecules. For instance, a molecule of water consists of two hydrogen atoms bonded to one oxygen atom. This combination and interaction of atoms result in the formation of distinct substances with unique properties. The other options refer to different structures and levels of organization in biology. A single atom does not qualify as a molecule, as molecules require the bonding of two or more atoms. Additionally, cells are larger organizational units made up of multiple molecules, meaning they represent a higher level of biological structure. Complex carbohydrates also fall into the category of macromolecules, but they themselves consist of multiple smaller molecules (like monosaccharides) linked together, making them more a specific example rather than a definition of what constitutes a molecule.

8. What type of connective tissue is known as fatty tissue?

- A. Adipose tissue**
- B. Fibrous connective tissue
- C. Reticular connective tissue
- D. Cartilage

Adipose tissue is recognized as fatty tissue because it primarily consists of adipocytes, or fat cells, that store energy in the form of fat. This type of connective tissue provides insulation, cushioning for organs, and serves as a reserve of energy. It plays a crucial role in the body's metabolism and overall health, supporting both structural and functional needs. While fibrous connective tissue provides strength and support in tendons and ligaments, and reticular connective tissue forms a supportive framework for organs, these do not have the specialized function of storing fat. Cartilage, a specialized type of connective tissue, provides elasticity and support at joints but doesn't contain the large fat reserves characteristic of adipose tissue.

9. What is the primary function of the kidneys?

- A. Produce hormones
- B. Filter blood and produce urine**
- C. Facilitate gas exchange
- D. Store nutrients

The primary function of the kidneys is to filter blood and produce urine. This vital role involves removing waste products, excess substances, and toxins from the bloodstream, which helps maintain the body's internal balance, or homeostasis. The kidneys regulate the volume and composition of bodily fluids, manage electrolytes, control blood pressure through the regulation of fluid levels, and maintain acid-base balance. The urine produced then serves as a way for the body to excrete these waste materials. While the kidneys do produce certain hormones, such as erythropoietin and renin, this is not their primary function but rather an additional role they play. Likewise, gas exchange occurs primarily in the lungs, and the storage of nutrients occurs mainly in organs like the liver and muscles. Therefore, the most accurate and encompassing answer regarding the primary role of the kidneys focuses on their essential function in filtration and urine production.

10. Which system is responsible for maintaining posture?

- A. Nervous system
- B. Skeletal system
- C. Muscular system**
- D. Integumentary system

The muscular system plays a crucial role in maintaining posture. This system is composed of muscles that are responsible for movement and stabilization of the body. When the muscles contract, they generate force that helps hold the body upright against the pull of gravity. The coordination between various muscle groups allows for balance and support in static (standing) and dynamic (moving) positions. Additionally, muscle tone, which is the continuous and passive partial contraction of the muscles, helps maintain the body's position. The muscular system works in conjunction with the skeletal system, which provides the framework and structure that supports muscle action, but it is the muscles themselves that directly control posture through their ability to contract and fatigue over time. Other systems, such as the nervous system, facilitate communication and coordination between the body and the muscles, while the integumentary system primarily protects the body and does not play a direct role in posture.

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://phs71basicstructurehumanbody.examzify.com>

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

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