

Galen Integrated Human Science Exam 1 Practice (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 the anatomical term for the area around the groin?**
 - A. Inguinal**
 - B. Orbital**
 - C. Oral**
 - D. Patellar**

- 2. Which anatomical position term refers to a structure located on the same side of the body?**
 - A. Contralateral**
 - B. Unilateral**
 - C. Ipsi-lateral**
 - D. Transverse**

- 3. What component of the nervous system transmits signals away from the central nervous system?**
 - A. Sensory neurons**
 - B. Motor neurons**
 - C. Interneurons**
 - D. Sympathetic neurons**

- 4. In cellular biology, diffusion is primarily characterized by which of the following?**
 - A. Assisted movement through protein channels**
 - B. Movement towards isotonic solutions**
 - C. Movement from high concentration to low concentration**
 - D. Requires energy input from the cell**

- 5. What anatomical term describes a position toward the back of the body?**
 - A. Medial**
 - B. Deep**
 - C. Posterior**
 - D. Antecubital**

- 6. What is required for active transport mechanisms to function?**
- A. Passive energy**
 - B. Electrical potential**
 - C. Input of energy**
 - D. Concentration gradient**
- 7. Which gene type can mask the expression of another gene?**
- A. Recessive gene**
 - B. Dominant gene**
 - C. Incomplete gene**
 - D. Co-dominant gene**
- 8. What are organic compounds composed of carbon, hydrogen, and oxygen called?**
- A. Monosaccharides**
 - B. Polysaccharides**
 - C. Carbohydrates**
 - D. Disaccharides**
- 9. What is the term for a position away from the point of attachment?**
- A. Proximal**
 - B. Inferior**
 - C. Distal**
 - D. Medial**
- 10. What is the primary function of the respiratory system?**
- A. To circulate blood throughout the body**
 - B. To exchange gases between the body and the environment**
 - C. To digest food and absorb nutrients**
 - D. To regulate body temperature**

Answers

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

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Explanations

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1. What is the anatomical term for the area around the groin?

- A. Inguinal**
- B. Orbital**
- C. Oral**
- D. Patellar**

The anatomical term for the area around the groin is inguinal. This term specifically refers to the region where the lower abdomen meets the upper thigh, often associated with structures like the inguinal canal, which is important in both male and female anatomy. The inguinal region is clinically significant due to its association with hernias and is a point of reference in various medical examinations and procedures. In contrast, the other terms refer to different areas of the body. "Orbital" pertains to the eye area, "oral" refers to the mouth region, and "patellar" is related to the kneecap. Each term describes distinct anatomical locations, illustrating the importance of using precise terminology in anatomy to avoid confusion.

2. Which anatomical position term refers to a structure located on the same side of the body?

- A. Contralateral**
- B. Unilateral**
- C. Ipsi-lateral**
- D. Transverse**

The term that refers to a structure located on the same side of the body is "ipsilateral." This term is often used in anatomy to help describe the location of structures, allowing for clearer communication regarding their positions relative to one another. For instance, if a person has a pain in their left arm, any damages or issues that arise in structures on the left side would be considered ipsilateral. Contralateral, in contrast, refers to structures that are on opposite sides of the body, such as the left arm being contralateral to the right arm. Unilateral describes a condition affecting one side of the body but doesn't specifically denote which side. Transverse refers to a plane that divides the body into superior (upper) and inferior (lower) parts, not to the relative positioning of structures themselves. Thus, in the context of the question, "ipsilateral" is specifically appropriate for indicating structures that are on the same side.

3. What component of the nervous system transmits signals away from the central nervous system?

- A. Sensory neurons**
- B. Motor neurons**
- C. Interneurons**
- D. Sympathetic neurons**

The correct answer is motor neurons because they play a crucial role in transmitting signals from the central nervous system (CNS) to the muscles and glands throughout the body. The CNS, which includes the brain and spinal cord, processes information and sends out commands to enable movement and regulate bodily functions. Motor neurons specifically carry these outgoing signals, facilitating voluntary and involuntary actions by stimulating muscle contractions or gland secretions. This is essential for functions such as moving limbs, breathing, and reflex actions. In contrast, sensory neurons are responsible for transmitting signals from sensory receptors to the CNS, allowing the brain to interpret sensory information. Interneurons act within the CNS to connect sensory and motor pathways, processing information and facilitating communication between different types of neurons. Sympathetic neurons are part of the autonomic nervous system, involved in the body's response to stress, but their primary function involves regulating involuntary physiological responses rather than transmitting signals away from the CNS.

4. In cellular biology, diffusion is primarily characterized by which of the following?

- A. Assisted movement through protein channels**
- B. Movement towards isotonic solutions**
- C. Movement from high concentration to low concentration**
- D. Requires energy input from the cell**

Diffusion is a fundamental process in cellular biology characterized by the movement of molecules from an area of high concentration to an area of low concentration. This concept is rooted in the tendency of substances to distribute themselves evenly in a given space. As molecules move down their concentration gradient, they achieve equilibrium, minimizing concentration differences across the membrane or within a solution. This process is passive, meaning it does not require energy input; instead, it is driven by the kinetic energy of the molecules themselves. The movement continues until there is no longer a concentration gradient, at which point the molecules are evenly distributed. This mechanism is essential for various biological functions, such as gas exchange in the lungs and the uptake of nutrients by cells. Other mechanisms, such as facilitated diffusion (which involves assisted movement through protein channels), active transport (which does require energy), and considerations around isotonic solutions, all describe different processes in cellular transport but do not define diffusion itself.

5. What anatomical term describes a position toward the back of the body?

- A. Medial**
- B. Deep**
- C. Posterior**
- D. Antecubital**

The term "posterior" is used to describe a position that is towards the back of the body. In anatomical terminology, the body is commonly referenced using directional terms to provide clarity in describing locations and positions of structures. When one refers to something as being posterior, it means that it is situated behind another structure or further along the back of the body. For instance, the heart is positioned posterior to the sternum, indicating that it is located behind this bone. This terminology is essential for healthcare professionals and anatomists because it allows for precise communication about the location of organs, tissues, and other structures within the human body. In contrast, terms like medial refer to a position toward the midline of the body, deep refers to structures situated away from the surface of the body, and antecubital describes the front of the elbow area, which are all unrelated to describing the rear or back positioning. Hence, understanding the anatomical terms and their precise meanings is fundamental in the field of human sciences.

6. What is required for active transport mechanisms to function?

- A. Passive energy**
- B. Electrical potential**
- C. Input of energy**
- D. Concentration gradient**

Active transport mechanisms require an input of energy to function effectively. This is necessary because active transport moves substances against their concentration gradient, meaning it transports molecules from areas of lower concentration to areas of higher concentration. This process cannot occur spontaneously, as it opposes the natural flow of diffusion. The energy for active transport typically comes from the hydrolysis of ATP (adenosine triphosphate). This energy source provides the necessary power to the transport proteins embedded in the cell membrane, allowing them to change shape and move molecules into or out of the cell against their concentration gradients. Without this energy input, the transportation of substances via active mechanisms would not occur, hindering cellular processes that depend on maintaining specific concentrations of ions and nutrients.

7. Which gene type can mask the expression of another gene?

- A. Recessive gene
- B. Dominant gene**
- C. Incomplete gene
- D. Co-dominant gene

A dominant gene can mask the expression of another gene because it exerts its effect even when only one copy is present. In genetic terms, if an individual has one dominant allele and one recessive allele for a specific trait, the dominant allele will determine the phenotype; thus, the characteristics associated with the recessive allele will not be expressed. For example, if we consider a trait governed by two alleles, A (dominant) and a (recessive), an individual with genotypes AA or Aa will express the trait associated with the dominant allele (A) while the recessive trait does not manifest unless the individual has two copies of the recessive allele (aa). This characteristic of dominance is crucial in understanding inheritance patterns in organisms. In contrast, recessive genes require two copies to be expressed and wouldn't mask other gene expressions. Incomplete dominance refers to a situation where neither allele is completely dominant, resulting in a blending of traits, and co-dominance involves both alleles being fully expressed simultaneously rather than one masking the other.

8. What are organic compounds composed of carbon, hydrogen, and oxygen called?

- A. Monosaccharides
- B. Polysaccharides
- C. Carbohydrates**
- D. Disaccharides

Organic compounds that are composed predominantly of carbon, hydrogen, and oxygen are classified as carbohydrates. Carbohydrates serve essential roles in biological systems, primarily as a source of energy and as structural components. They are categorized based on the number of sugar units they contain. Monosaccharides, disaccharides, and polysaccharides are specific types of carbohydrates. Monosaccharides consist of single sugar units, disaccharides are formed from two monosaccharides, and polysaccharides are long chains of monosaccharide units. While each of these terms describes types of carbohydrates, the broader category that encompasses all of them, as well as their defining composition of carbon, hydrogen, and oxygen, is carbohydrates. Thus, the answer is correct as it accurately identifies the general classification of these organic compounds.

9. What is the term for a position away from the point of attachment?

- A. Proximal**
- B. Inferior**
- C. Distal**
- D. Medial**

The term that describes a position away from the point of attachment is "distal." In anatomical terminology, "distal" refers to a point that is farther from the trunk or the point of origin of a limb or structure. For example, in relation to the human arm, the fingers are distal to the wrist; that is, they are farther from the body's center compared to the wrist. In contrast, "proximal" refers to a location closer to the point of attachment or to the trunk, while "inferior" describes a position that is lower relative to another structure, and "medial" refers to a position that is closer to the midline of the body. Understanding these terms is essential for accurately describing anatomical positions and relationships within the body.

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

- A. To circulate blood throughout the body**
- B. To exchange gases between the body and the environment**
- C. To digest food and absorb nutrients**
- D. To regulate body temperature**

The primary function of the respiratory system is to exchange gases between the body and the environment. This process involves inhaling oxygen-rich air into the lungs, where oxygen is transferred to the bloodstream. At the same time, carbon dioxide, a waste product of metabolism, is expelled from the blood and exhaled out of the body. This gas exchange is crucial for maintaining the body's metabolic functions, supplying oxygen for cellular respiration, and removing carbon dioxide to prevent toxicity. While other systems play important roles in functions such as circulation, digestion, and temperature regulation, they do not primarily focus on gas exchange like the respiratory system does. Understanding this central role helps clarify the significance of the respiratory process in overall human physiology.

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://galeninteghumansci1.examzify.com>

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

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