

ANATOMY AND PHYSIOLOGY CFE PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://anatomyphysiocfe.examzify.com>



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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. Internal respiration occurs in which site?**
 - A. Capillaries
 - B. Lungs
 - C. Trachea
 - D. Bronchioles
- 2. Compared to nervous system signaling, endocrine signaling is generally**
 - A. Slower and longer lasting
 - B. Faster and shorter lasting
 - C. Immediate and constant
 - D. Not involved in homeostasis
- 3. The olfactory sense is responsible for which sense?**
 - A. Vision
 - B. Hearing
 - C. Taste
 - D. Smell
- 4. Which set lists organs involved in mechanical digestion?**
 - A. Mouth, esophagus, large intestine
 - B. Mouth, stomach, small intestine
 - C. Stomach, liver, pancreas
 - D. Teeth, liver, gallbladder
- 5. Which cell type builds bone and remodels bone?**
 - A. Osteoblasts
 - B. Osteoclasts
 - C. Cartilage
 - D. Tendon
- 6. Sarcomeres are defined as the region between two Z-lines.**
 - A. Between two M-lines
 - B. Around the M-line
 - C. Between two Z-lines
 - D. Across the I-band

7. Which hormone maintains pregnancy?

- A. Progesterone
- B. Estrogen
- C. Cortisol
- D. Thyroxine

8. Which part of the eye is the colored portion that constricts and dilates to regulate light entry?

- A. Iris
- B. Pupil
- C. Retina
- D. Sclera

9. Myosin is which type of filament?

- A. Titin
- B. Nebulin
- C. Myosin
- D. Actin

10. Action potential travels as what kind of signal along the axon?

- A. Electrical signal
- B. Chemical signal
- C. Magnetic signal
- D. Gravitational signal

Answers

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

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Explanations

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1. Internal respiration occurs in which site?

- A. Capillaries
- B. Lungs
- C. Trachea
- D. Bronchioles

Internal respiration is the gas exchange between blood and body tissues, and it occurs mainly in the systemic capillaries. Here, oxygen diffuses from the blood into tissue cells while carbon dioxide diffuses from the tissues into the blood to be carried away. Capillaries are the right site because their walls are extremely thin and they form a dense network right next to every cell, keeping the diffusion distance short and providing lots of surface area for exchange. This is distinct from external respiration, which happens in the lungs at the alveolar level, where gases move between air and blood. The trachea and bronchioles merely conduct air and do not participate in gas exchange.

2. Compared to nervous system signaling, endocrine signaling is generally

- A. Slower and longer lasting
- B. Faster and shorter lasting
- C. Immediate and constant
- D. Not involved in homeostasis

Endocrine signaling works through hormones released into the bloodstream to reach distant targets. Because hormones travel through the circulatory system, their onset is slower, since it takes time for hormones to circulate and encounter receptors. Once they act, their effects can be long-lasting because hormones can persist in the blood for extended periods and trigger intracellular cascades that keep producing effects even after the initial signal is gone. In contrast, nervous system signaling uses fast electrical impulses and neurotransmitters released at synapses directly onto adjacent cells. This yields rapid, precise responses that are typically brief, ending quickly once neurotransmitters are cleared or reabsorbed. So, compared with nervous signaling, endocrine signaling is generally slower to start but longer-lasting. The endocrine system is also a key regulator of homeostasis, so the idea that it isn't involved in homeostasis isn't correct.

3. The olfactory sense is responsible for which sense?

- A. Vision
- B. Hearing
- C. Taste
- D. Smell

The olfactory sense corresponds to the ability to smell. In the nasal cavity, odor molecules bind to specialized receptors on olfactory neurons, triggering signals that travel via the olfactory nerve to the brain. This pathway leads to regions such as the olfactory bulb and areas involved in smell processing and emotion. This is distinct from vision, which uses the eyes to detect light; hearing, which uses the ears to detect sound; and taste, which uses taste buds on the tongue to detect dissolved chemicals. So the olfactory sense is responsible for smelling.

4. Which set lists organs involved in mechanical digestion?

- A. Mouth, esophagus, large intestine
- B. Mouth, stomach, small intestine**
- C. Stomach, liver, pancreas
- D. Teeth, liver, gallbladder

Mechanical digestion is the physical breakdown of food into smaller pieces to increase surface area for enzymes. This starts in the mouth, where teeth chew and mix food with saliva. In the stomach, muscular contractions churn and mix the contents, further breaking them into a semi-liquid form. In the small intestine, rhythmic segmentation helps mix and move the contents, aiding further breakdown and preparation for chemical digestion and absorption. So the set that includes mouth, stomach, and small intestine matches all the sites where these mechanical processes actively occur. The other options pair organs that aren't primarily involved in mechanical breakdown—esophagus mainly moves everything along, the large intestine focuses on water absorption, and liver/pancreas/gallbladder are mainly secretory, not mechanical, functions.

5. Which cell type builds bone and remodels bone?

- A. Osteoblasts**
- B. Osteoclasts
- C. Cartilage
- D. Tendon

Osteoblasts are the cells that build bone and drive its remodeling. They synthesize and secrete osteoid, the organic matrix rich in collagen, and then promote mineralization with calcium phosphate to form hard bone. In the remodeling process, osteoclasts resorb old bone, and osteoblasts come in to lay down new bone, restoring structure and strength. While osteocytes help regulate remodeling in response to mechanical stress, and cartilage or tendon are not bone-forming cells, osteoblasts are the key players in both forming and renewing bone.

6. Sarcomeres are defined as the region between two Z-lines.

- A. Between two M-lines
- B. Around the M-line
- C. Between two Z-lines**
- D. Across the I-band

A sarcomere is the basic contractile unit of a striated muscle, defined by the segment between two Z-lines (Z-discs). The Z-lines mark the boundaries where adjacent sarcomeres meet, anchoring the thin actin filaments and providing the repeating unit that shortens during contraction. The center of a sarcomere contains the M-line, where thick myosin filaments are anchored, but this is not the boundary. The I-band lies adjacent to the Z-lines and contains only thin filaments, while the A-band runs the length of the thick filament and overlaps with thin filaments in the middle of the sarcomere. Because boundaries are set by the Z-lines, the region between two Z-lines is the correct definition of a sarcomere.

7. Which hormone maintains pregnancy?

A. Progesterone

B. Estrogen

C. Cortisol

D. Thyroxine

Progesterone is the hormone that keeps pregnancy going by stabilizing the uterine lining and quieting the uterus. After ovulation, the corpus luteum secretes progesterone to sustain the endometrium and prevent it from shedding. If pregnancy occurs, the placenta eventually takes over progesterone production, ensuring ongoing support of the uterine environment throughout gestation. This hormonal support helps prevent contractions and maintains a hospitable environment for the developing fetus. Estrogen mainly supports uterine growth and breast development, while cortisol and thyroxine have other roles in fetal development and metabolism rather than maintaining pregnancy itself.

8. Which part of the eye is the colored portion that constricts and dilates to regulate light entry?

A. Iris

B. Pupil

C. Retina

D. Sclera

The iris is the colored ring around the pupil that controls light entry by adjusting the size of the pupil. It contains two smooth muscle groups: the sphincter pupillae constricts the pupil in bright light, reducing light entry, while the dilator pupillae dilates the pupil in dim light, allowing more light in. The pupil itself is the central opening that changes size, the retina is the light-detecting layer inside the eye, and the sclera is the tough white outer layer. So the colored portion responsible for constricting and dilating is the iris.

9. Myosin is which type of filament?

A. Titin

B. Nebulin

C. Myosin

D. Actin

In skeletal muscle, filaments are categorized as thick and thin. Myosin forms the thick filament, serving as the motor that pulls on actin during contraction. Its long tails create the filament backbone, while the heads reach out to bind actin on the thin filaments and hydrolyze ATP to drive the sliding of filaments together, shortening the sarcomere and generating force. The other proteins listed are not thick filaments: titin provides elasticity and anchors thick filaments within the sarcomere; nebulin helps define thin filament length along actin; actin is the primary component of the thin filament. So, myosin is the thick filament.

10. Action potential travels as what kind of signal along the axon?

- A. Electrical signal
- B. Chemical signal
- C. Magnetic signal
- D. Gravitational signal

An action potential travels along the axon as an electrical signal—a rapid, self-propagating change in membrane potential driven by voltage-gated ion channels. During this process, positively charged ions flow into and out of the neuron membrane, creating a wave of depolarization that moves from one segment of the axon to the next. This propagation is electrical because it's the membrane potential itself that changes and spreads along the membrane, not a chemical substance moving along the axon. The signal can travel quickly and without decreasing in strength, especially in myelinated fibers where the impulse hops between nodes of Ranvier in a process called saltatory conduction. Outside the axon, communication between neurons at synapses occurs via chemical signals (neurotransmitters) or, less commonly, electrical gaps, but the conduction along the axon itself is fundamentally electrical. The other options describe signals that do not account for how the action potential moves along the axon.

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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://anatomyphysiocfe.examzify.com>

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

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