Abeka Biology Test 3 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

1. The eight carpal bones are arranged into how many rows?

A. One

B. Two

C. Three

D. Four

2. Spore-bearing vascular plants such as ferns, club mosses, and horsetails are called what?

A. Ferns, Club Mosses, Horsetails

B. Sacrum

C. Tibia

D. Ulna

3. Which distal row carpal bone articulates with the bases of the fourth and fifth metacarpals?

A. Hamate

B. Capitate

C. Trapezoid

D. Trapezium

4. The growth of a plant toward or away from a stimulus such as light, water, touch or gravity is known as?

A. Tropism

B. Thigmotropism

C. Phototropism

D. Gravitropism

5. Which connective tissue binds bones to bones?

A. Tendons

B. Ligaments

C. Cartilage

D. Joints

6. The one-way diffusion of water through a semipermeable membrane is known as?

A. Osmosis

B. Diffusion

C. Active Transport

D. Facilitated Diffusion

7. Which proximal row carpal bone is most commonly dislocated?

A. Lunate

B. Scaphoid

C. Pisiform

D. Capitate

8. What is the primary purpose of flowers to a plant?

A. Produce seeds

B. Attract pollinators

C. Absorb nutrients

D. Store water

9. Which type of tissue covers and lines body parts?

A. Nervous tissue

B. Muscle tissue

C. Epithelial tissue

D. Connective tissue

10. Which group includes flowering seed plants that produce seeds enclosed by fruits?

A. Angiosperms

B. Gymnosperms

C. Ferns

D. Bryophytes

Answers

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

Explanations

1. The eight carpal bones are arranged into how many rows?

A. One

B. Two

C. Three

D. Four

The wrist bones are organized to allow smooth, stable movement by forming two parallel rows. There are eight carpal bones, four in the proximal row (closer to the forearm) and four in the distal row (closer to the hand). This two-row arrangement—proximal row and distal row—permits the wrist to flex, extend, and glide against the forearm and meet the metacarpals with stable joints. So, the eight carpal bones are arranged into two rows.

2. Spore-bearing vascular plants such as ferns, club mosses, and horsetails are called what?

A. Ferns, Club Mosses, Horsetails

B. Sacrum

C. Tibia

D. Ulna

Spore-bearing vascular plants reproduce by spores and have vascular tissue, not seeds or flowers. The group that includes ferns, club mosses, and horsetails is called pteridophytes, a term you'll see to describe these non-seed plants that still have tissues for transporting water and nutrients. The option that lists those exact plants—Ferns, Club Mosses, Horsetails—directly names the members of that group, so it identifies the correct category. The other choices are bones in the human skeleton (sacrum, tibia, ulna), which have no relation to plant groups.

3. Which distal row carpal bone articulates with the bases of the fourth and fifth metacarpals?

A. Hamate

B. Capitate

C. Trapezoid

D. Trapezium

In the distal row of carpal bones, the hamate sits on the ulnar side and forms the carpometacarpal joints with the bases of the fourth and fifth metacarpals. The fourth metacarpal base does articulate with capitate as well, but the only distal row bone that interfaces with both the 4th and 5th bases is the hamate. The other distal row bones have primary contacts with different metacarpal bases (trapezium with the first, trapezoid with the second, capitate with the third). So the bone that articulates with both the bases of the fourth and fifth metacarpals is the hamate.

4. The growth of a plant toward or away from a stimulus such as light, water, touch or gravity is known as?

A. Tropism

B. Thigmotropism

C. Phototropism

D. Gravitropism

Tropism is directional growth of a plant organ toward or away from a stimulus. This explains how plants orient themselves to favorable conditions. The stimuli listed—light, gravity, touch, and water—trigger tropic responses. When growth is toward light, it's phototropism; toward gravity, gravitropism; toward touch, thigmotropism; toward water, hydrotropism. A common mechanism involves uneven distribution of auxin, a plant hormone, which causes cells on one side to elongate more and bend the organ toward or away from the stimulus. In this broad sense, the general term for the described growth is tropism.

5. Which connective tissue binds bones to bones?

A. Tendons

B. Ligaments

C. Cartilage

D. Joints

Ligaments are the connective tissue that binds bones to bones across a joint. They're dense bands rich in collagen that stabilize joints by holding the bones in proper alignment and limiting too much movement, which helps prevent dislocations. Tendons, in contrast, attach muscles to bones. Cartilage covers the ends of bones to cushion them and reduce friction during movement, rather than binding bones together. Joints themselves are the places where bones meet, not the tissue that binds them.

6. The one-way diffusion of water through a semipermeable membrane is known as?

A. Osmosis

B. Diffusion

C. Active Transport

D. Facilitated Diffusion

Osmosis is the diffusion of water across a semipermeable membrane from an area of higher water potential to an area of lower water potential (from lower solute concentration to higher solute concentration). This movement is passive, requiring no energy, and it continues to balance the solute concentrations on both sides of the membrane. It differs from general diffusion, which can involve solutes, and from active transport, which uses energy to move substances against their gradient. Facilitated diffusion uses proteins to help substances cross the membrane down their gradient, but osmosis is specifically about water movement through a membrane.

7. Which proximal row carpal bone is most commonly dislocated?

A. Lunate

B. Scaphoid

C. Pisiform

D. Capitate

When the wrist is forced into a hard extension, the sharp place where the radiocarpal ligaments are weaker, called the space of Poirier, becomes a vulnerable route. The lunate sits right in the middle of the proximal row and is held in place mainly by the dorsal ligaments, while the volar (palm-side) side is comparatively less reinforced. That combination makes the lunate more likely to slip out of alignment anteriorly into the carpal tunnel when the ligaments tear under stress. Scaphoid fractures are more common in this mechanism, because the scaphoid bears a lot of the load between the radius and the distal row, but it tends to break rather than dislocate. Pisiform and capitate are better stabilized by their ligament connections, so they're less prone to dislocation. So the bone most commonly dislocated in the proximal row is the lunate.

8. What is the primary purpose of flowers to a plant?

A. Produce seeds

B. Attract pollinators

C. Absorb nutrients

D. Store water

Flowers are the plant's reproductive structures. Their primary job is to enable reproduction by producing seeds. Pollen from the male parts must reach the ovules in the female parts, fertilization occurs, and the ovary develops into seeds that can grow into new plants. Attracting pollinators helps this process by increasing the chances of pollen transfer, but the ultimate purpose of the flower is seed production. Absorbing nutrients and storing water are handled by other plant parts like roots and leaves, not by flowers.

9. Which type of tissue covers and lines body parts?

A. Nervous tissue

B. Muscle tissue

C. Epithelial tissue

D. Connective tissue

Epithelial tissue covers and lines body parts. It forms the outer layer of the skin and lines hollow organs and cavities, as well as ducts and glands. Its cells are tightly packed and sit on a basement membrane, and the tissue is usually avascular, getting nutrients from nearby tissues. Epithelial tissue comes in various shapes (squamous, cuboidal, columnar) and arrangements (single layer or multiple layers), which enables protection, secretion, and absorption. This is why it best fits the idea of covering and lining body surfaces, unlike nervous tissue that transmits signals, muscle tissue that contracts to move, or connective tissue that supports and binds.

10. Which group includes flowering seed plants that produce seeds enclosed by fruits?

A. Angiosperms

B. Gymnosperms

C. Ferns

D. Bryophytes

Angiosperms are flowering seed plants whose seeds develop inside a fruit. The defining feature is that the ovules are enclosed within a ovary, and after fertilization the ovary matures into a fruit that encases the seeds. This arrangement protects the seeds and often helps disperse them. In contrast, gymnosperms have seeds that are not enclosed in fruits, instead sitting on cones or exposed surfaces; ferns reproduce by spores rather than seeds; bryophytes are nonvascular plants that also reproduce by spores. So the group described—flowering seed plants with seeds enclosed by fruits—is angiosperms.

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://abekabiology3.examzify.com

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