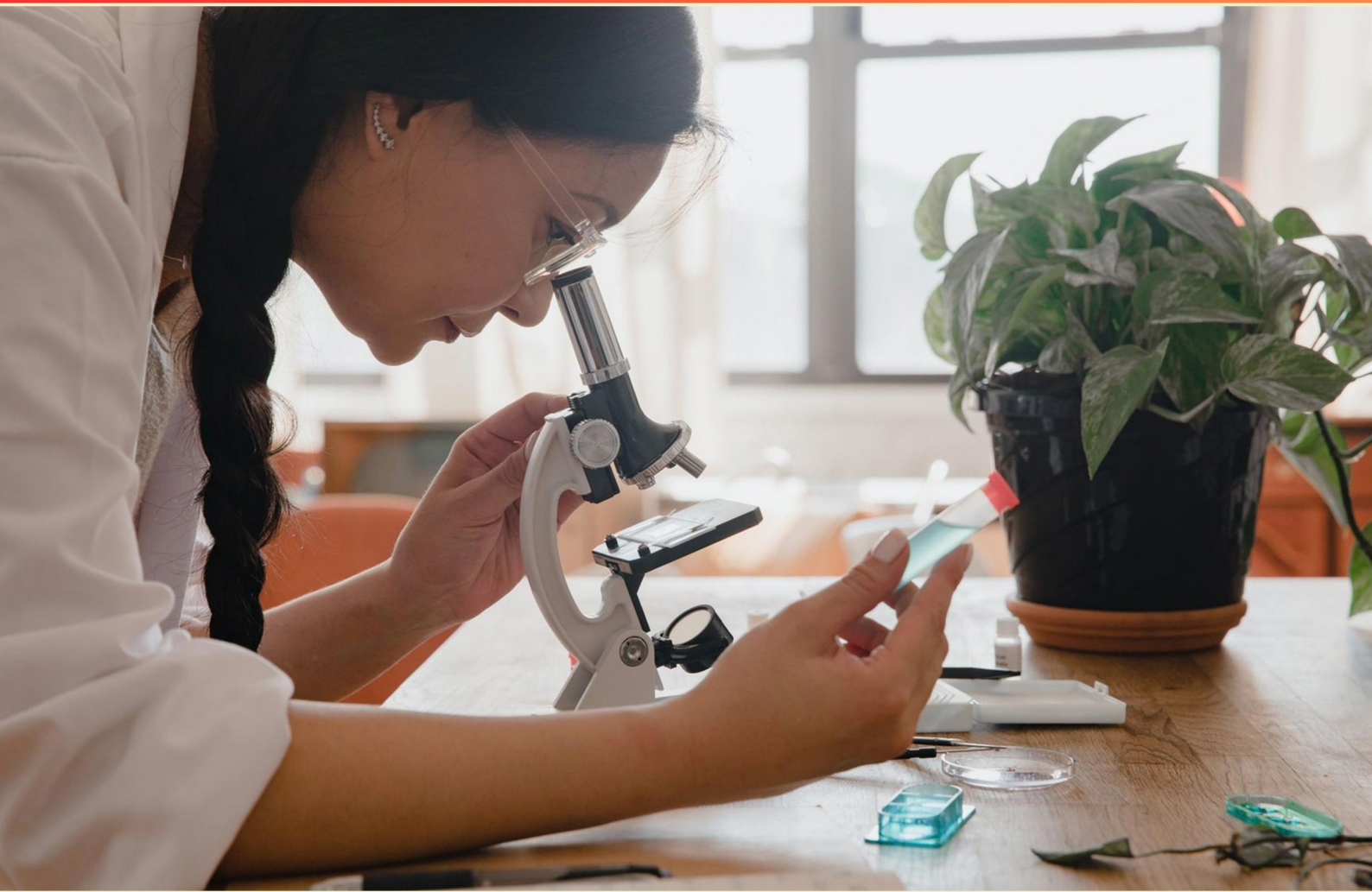


ABEKA BIOLOGY TEST 3 PRACTICE (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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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 type of organism is typically described as producers because it makes its own food?**
 - A. Consumers
 - B. Producers
 - C. Decomposers
 - D. Parasites

- 2. How do viruses reproduce?**
 - A. They require a host cell to reproduce.
 - B. They reproduce by fusing with other viruses to exchange DNA.
 - C. They reproduce by infecting a host cell and using its machinery to create new viral particles (lytic or lysogenic).
 - D. They reproduce by photosynthesis.

- 3. Leaves with more than one blade on a single petiole are called?**
 - A. Simple Leaves
 - B. Compound Leaves
 - C. Lobed Leaves
 - D. Needle Leaves

- 4. Which genetic scenario describes both alleles being fully and simultaneously expressed in the phenotype?**
 - A. Incomplete dominance
 - B. Homozygous
 - C. Dominant expression with masking
 - D. Codominance

- 5. Which term describes the production of new plants from vegetative parts such as stems or roots?**
 - A. Vegetative Propagation
 - B. Seed Propagation
 - C. Sexual Propagation
 - D. Cloning

- 6. Which term describes the genetic makeup of an organism?**
- A. Phenotype
 - B. Genotype
 - C. Allele
 - D. Locus
- 7. Which statement describes aerobic and anaerobic respiration?**
- A. Aerobic uses oxygen and yields more ATP; anaerobic without oxygen yields less ATP
 - B. Anaerobic yields more ATP; aerobic yields less ATP
 - C. Both require oxygen, but only aerobic produces carbon dioxide
 - D. Anaerobic occurs only in bacteria
- 8. Which term refers to the muscle located on the front of the upper arm?**
- A. Biceps brachii
 - B. Deltoid
 - C. Triceps brachii
 - D. Humerus
- 9. A flower that consists of disk flowers and ray flowers is known as a**
- A. Composite Flower
 - B. Simple Flower
 - C. Headflower
 - D. Spike Flower
- 10. In a typical food chain, which level is composed of organisms that eat producers?**
- A. Producers
 - B. Tertiary consumers
 - C. Primary consumers
 - D. Decomposers

Answers

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

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Explanations

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1. Which type of organism is typically described as producers because it makes its own food?

- A. Consumers
- B. Producers**
- C. Decomposers
- D. Parasites

Producers are organisms that make their own food, forming the base of ecosystems. They typically use light energy to drive photosynthesis, turning carbon dioxide and water into sugars and oxygen. This ability to create organic matter from inorganic sources means they supply the energy and organic material that all other organisms in the food web rely on. Some producers, like certain bacteria, use chemical energy instead of light (chemosynthesis), but the core idea is the same: they synthesize their own nourishment rather than obtaining it by eating others. Other types of organisms don't make food this way. Consumers rely on eating other organisms for energy and nutrients. Decomposers break down dead material, recycling nutrients rather than providing new organic matter. Parasites live on or in a host and take nutrients from it. Because producers are the ones that create organic food themselves, they are described as producers.

2. How do viruses reproduce?

- A. They require a host cell to reproduce.
- B. They reproduce by fusing with other viruses to exchange DNA.
- C. They reproduce by infecting a host cell and using its machinery to create new viral particles (lytic or lysogenic).**
- D. They reproduce by photosynthesis.

Viruses reproduce by hijacking a host cell's machinery. They can't carry out metabolism or make new copies on their own, so once a virus infects a cell, its genome is copied and viral proteins are produced using the cell's ribosomes, enzymes, and energy. New viral particles are then assembled inside the cell and released. This process can follow two main routes. In the lytic cycle, many new viruses are made quickly and the cell is often destroyed to release them. In the lysogenic cycle, the viral genome integrates into the host's DNA and lies dormant for a time, replicated along with the host genome until conditions trigger active production. So the best description is that viruses infect a host cell and use its machinery to create new viral particles, with outcomes that can be lytic or lysogenic.

3. Leaves with more than one blade on a single petiole are called?

- A. Simple Leaves
- B. Compound Leaves**
- C. Lobed Leaves
- D. Needle Leaves

Leaves classified by how many blades attach to one stalk show a key distinction. When several leaf blades attach to a single petiole, that structure is a compound leaf—the blades are leaflets arranged along a common stalk. Each leaflet may resemble a tiny leaf, but they share one petiole and form the whole leaf together. A simple leaf has just one blade on its petiole, so there's no separate leaflet unit. A lobed leaf is still one blade with deep indentations, not multiple leaflets. Needle leaves are a different form altogether, typically slender and not composed of multiple leaflets on one stalk. So the description given fits compound leaves.

4. Which genetic scenario describes both alleles being fully and simultaneously expressed in the phenotype?

- A. Incomplete dominance
- B. Homozygous
- C. Dominant expression with masking

D. Codominance

When looking at how alleles are expressed in a heterozygous individual, codominance is the pattern where both alleles are shown fully and at once in the phenotype. A classic example is the ABO blood types: an individual with one A allele and one B allele expresses both A and B antigens, resulting in the AB blood type. This stands in contrast to incomplete dominance, where the heterozygote shows an intermediate trait (like a pink flower from red and white). It also differs from homozygous, where both alleles are the same, so only one form is produced, and from a dominant allele masking the other, where only the dominant trait appears.

5. Which term describes the production of new plants from vegetative parts such as stems or roots?

A. Vegetative Propagation

- B. Seed Propagation
- C. Sexual Propagation
- D. Cloning

Vegetative propagation describes how new plants can grow from non-reproductive parts of a plant, like stems or roots. In this process, tissue from the parent develops into a new plant without fertilization or seeds, so the offspring are typically genetically identical to the parent. This explains why organisms can rapidly spread and spread the parent's traits through shortcuts like runners, tubers, or plantlets that form on leaves. It contrasts with seed propagation, which requires seeds and sexual reproduction, and with the broader idea of cloning, which is a general term for making exact copies; in botany, the precise term for producing new plants from vegetative parts is vegetative propagation.

6. Which term describes the genetic makeup of an organism?

- A. Phenotype
- B. Genotype**
- C. Allele
- D. Locus

Genotype describes the genetic makeup. It's the specific combination of alleles an organism carries for each gene, such as AA, Aa, or aa for a particular gene. This is what determines inherited traits at the genetic level, even though the observable traits—the phenotype—come from the genotype expressed in the organism and can be influenced by the environment. An allele is a variant of a gene, and a locus is the exact position of a gene on a chromosome; these terms help describe inheritance, but they don't by themselves define the overall genetic makeup.

7. Which statement describes aerobic and anaerobic respiration?

- A. Aerobic uses oxygen and yields more ATP; anaerobic without oxygen yields less ATP**
- B. Anaerobic yields more ATP; aerobic yields less ATP
- C. Both require oxygen, but only aerobic produces carbon dioxide
- D. Anaerobic occurs only in bacteria

Oxygen availability changes how energy is extracted from glucose. In aerobic respiration, oxygen serves as the final electron acceptor in the electron transport chain, allowing glucose to be fully oxidized to carbon dioxide and water. This complete breakdown captures a lot of chemical energy, yielding a relatively large amount of ATP—about 30 to 32 per glucose in many cells. If oxygen isn't present, cells can't run the full chain. They still get some energy by glycolysis and then regenerate NAD⁺ through fermentation, but this pathway only yields a small amount of ATP—roughly 2 per glucose. That's why aerobic respiration produces much more ATP than anaerobic processes. So the statement that aerobic respiration uses oxygen and yields more ATP, while anaerobic respiration occurs without oxygen and yields less ATP, best describes how these two processes differ. The other options misstate either the role of oxygen, the energy yield, or where fermentation fits in, and aren't generally accurate.

8. Which term refers to the muscle located on the front of the upper arm?

- A. Biceps brachii**
- B. Deltoid
- C. Triceps brachii
- D. Humerus

Recognizing anatomy by location, the muscle on the front of the upper arm is the biceps brachii. It sits on the anterior aspect of the arm and is known for bending the elbow (flexion) and assisting in rotating the forearm (supination). The deltoid is the shoulder muscle that covers the shoulder joint, the triceps brachii runs along the back of the upper arm, and the humerus is the bone of the upper arm, not a muscle.

9. A flower that consists of disk flowers and ray flowers is known as a

- A. Composite Flower**
- B. Simple Flower
- C. Headflower
- D. Spike Flower

Composite flowers describe an inflorescence that looks like a single bloom but is actually a head made up of many small flowers. In these heads, disk flowers sit in the center as tubular blooms, while ray flowers around the edge have petal-like extensions. This combination gives the appearance of one flower while delivering multiple fertile units, which is why sunflowers, daisies, and related plants are called composite flowers. A simple flower is just one blossom with its own parts, not a cluster of many flowers. A spike flower refers to flowers arranged along a stem, not a head composed of disk and ray florets. Headflower isn't a standard botanical term for this structure. So, the best term is composite flower.

10. In a typical food chain, which level is composed of organisms that eat producers?

- A. Producers
- B. Tertiary consumers
- C. Primary consumers
- D. Decomposers

Energy moves from producers to the first group of consumers who feed directly on plants. These first-level consumers are herbivores, feeding on producers, so they form the primary consumer level. They're the organisms that obtain energy by eating the producers that captured energy from the sun. Higher levels—secondary and tertiary consumers—eat other animals, not plants, and decomposers break down dead material rather than feeding on living producers. So the organisms that eat producers belong to the primary consumer level.

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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://abekabiology3.examzify.com>

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

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