Biology Marking Period 3 Practice Test (Sample)

Study Guide

BY EXAMZIFY

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. What is a primary consumer?

A. Primary consumers eat decomposers.

B. Primary consumers eat producers.

C. Primary consumers eat primary consumers.

D. Primary consumers are producers.

2. What does the nucleus contain?

A. DNA

B. RNA

C. Proteins

D. Lipids

3. Which statement about eukaryotes is true?

A. Eukaryotes have a nucleus and are usually multicellular.

B. Eukaryotes lack a nucleus.

C. Eukaryotes have no membrane-bound organelles.

D. Eukaryotes reproduce only by spores.

4. What does the rough ER do?

A. Detoxifies chemicals

B. Packages proteins

C. The rough ER helps produce proteins.

D. Stores energy

5. Which factor is biotic?

A. Predators

B. Soil pH

C. Sunlight

D. Temperature

6. Who built his own microscope and observed microorganisms, calling them 'animalcules'?

A. Leeuwenhoek

B. Hooke

C. Schleiden

D. Virchow

7. Which kingdoms belong to the domain Eukarya?

A. Protists, Fungi, Plants, Animals

B. Eubacteria and Archaebacteria

C. Bacteria and Archaea

D. Protists, Fungi, Plants

8. What is the basic unit of life?

A. The molecule

B. The organ

C. The tissue

D. The cell

9. Which option correctly identifies the term for a living thing?

A. Organ

B. System

C. Tissue

D. Organism

10. What does a tertiary consumer do?

A. Eats producers.

B. Eats primary consumers.

C. Eats secondary consumers.

D. Makes its own food.

Answers

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

Explanations

1. What is a primary consumer?

A. Primary consumers eat decomposers.

B. Primary consumers eat producers.

C. Primary consumers eat primary consumers.

D. Primary consumers are producers.

In ecological energy flow, producers are organisms like plants and algae that capture energy from sunlight. A primary consumer is the first group of organisms that eat those producers, meaning they are herbivores that feed on plants. For example, a rabbit munching on grass or a caterpillar eating leaves shows this role. Therefore, the correct idea is that a primary consumer eats producers. The other descriptions don't fit: decomposers feed on dead matter, not live producers; secondary or higher-level consumers eat primary consumers; and producers themselves are the sources of energy, not the consumers.

2. What does the nucleus contain?

A. DNA

B. RNA

C. Proteins

D. Lipids

The nucleus houses the cell's genetic material—the blueprint that guides every cellular function. This material is DNA, which carries the instructions for making proteins and RNAs. DNA is packaged with proteins into chromatin inside the nucleus and is organized into chromosomes during cell division. RNA is made in the nucleus from DNA, but the long-term storage of genetic information inside the nucleus is DNA. Proteins and lipids have other roles and locations in the cell, but they are not the primary content stored in the nucleus. So, the nucleus contains DNA.

3. Which statement about eukaryotes is true?

A. Eukaryotes have a nucleus and are usually multicellular.

B. Eukaryotes lack a nucleus.

C. Eukaryotes have no membrane-bound organelles.

D. Eukaryotes reproduce only by spores.

Think about what sets eukaryotes apart: they have a true nucleus enclosed by a membrane and internal compartments formed by membrane-bound organelles like mitochondria and the Golgi apparatus. This organization enables complex cellular functions and supports multicellular life in many lineages, such as animals, plants, and fungi. That combination—nucleus plus membrane-bound organelles and the tendency toward multicellularity—is why this statement is true. It wouldn't be true that eukaryotes lack a nucleus or lack membrane-bound organelles, since those features define them and distinguish them from prokaryotes. And while some eukaryotes can reproduce by spores, many do not rely solely on spores, so "reproduce only by spores" isn't universally accurate.

4. What does the rough ER do?

A. Detoxifies chemicals

B. Packages proteins

C. The rough ER helps produce proteins.

D. Stores energy

The rough endoplasmic reticulum is studded with ribosomes, which makes it the site where new proteins are synthesized. As ribosomes build polypeptide chains, these chains are threaded into the ER lumen or inserted into the ER membrane, guided by signal sequences. Inside the ER, the proteins begin to fold and may receive initial modifications with help from chaperone proteins. Once properly folded, they're packed into transport vesicles that bud from the ER and carry the proteins to the Golgi apparatus for further processing and sorting to their final destinations, such as secretion, incorporation into membranes, or lysosomes. Detoxification is mainly a job of the smooth ER, and storing energy is handled by mitochondria (and chloroplasts in plants), so those roles don't fit the rough ER's function. Therefore, describing it as helping produce proteins is the best answer.

5. Which factor is biotic?

A. Predators

B. Soil pH

C. Sunlight

D. Temperature

Biotic factors are the living parts of an environment that shape how ecosystems function. Predators are living organisms that interact with other organisms by hunting and feeding, which directly affects prey populations, community structure, and energy flow. That living aspect is what makes predators biotic. In contrast, soil pH is a chemical property of the soil, sunlight is energy from the sun, and temperature is a physical condition of the environment. All of these are nonliving, or abiotic, factors.

6. Who built his own microscope and observed microorganisms, calling them 'animalcules'?

A. Leeuwenhoek

B. Hooke

C. Schleiden

D. Virchow

Observing microorganisms and naming them animalcules was a milestone achieved by Antonie van Leeuwenhoek. He built his own simple, high-magnification lenses and used them in tiny single-lens microscopes to examine pond water, dental plaque, and other samples. From these observations, he described bacteria, protozoa, sperm cells, and more, referring to them as animalcules in his letters to the Royal Society. This hands-on, lens-by-lens approach laid the groundwork for microbiology and earned him the title often given to the pioneer of tiny-life discovery. The other figures contributed important ideas later on—Hooke described cells in cork and coined the term cell, while Schleiden and Virchow advanced cell theory—but they are not the ones who first built a microscope and observed microorganisms calling them animalcules.

7. Which kingdoms belong to the domain Eukarya?

A. Protists, Fungi, Plants, Animals

B. Eubacteria and Archaebacteria

C. Bacteria and Archaea

D. Protists, Fungi, Plants

Eukaryotes are organisms with true nuclei and membrane-bound organelles, so the domain Eukarya includes all organisms with eukaryotic cells. The major kingdoms here are Protists, Fungi, Plants, and Animals. A choice that lists all four of these kingdoms correctly places them in Eukarya. The other options point to Bacteria and Archaea, which are prokaryotes without a nucleus and belong to separate domains, or to a subset that misses one of the eukaryotic kingdoms (such as omitting Animals), making it incomplete.

8. What is the basic unit of life?

A. The molecule

B. The organ

C. The tissue

D. The cell

The basic unit of life is the cell because it is the smallest structure that can carry out all life-sustaining processes. Cells perform metabolism, grow, respond to stimuli, and reproduce, and they contain essential components like a membrane, cytoplasm, and genetic material that drive these activities. In multicellular organisms, many cells come together to form tissues and organs, but life at higher levels still depends on the activities of individual cells. Molecules on their own can't sustain life, and tissues or organs are made up of cells working together. So the cell is the fundamental unit that defines living organisms.

9. Which option correctly identifies the term for a living thing?

A. Organ

B. System

C. Tissue

D. Organism

Organism is the term for a living thing. An organism is any individual life form capable of carrying out life processes such as metabolism, growth, reproduction, and responding to the environment. This includes single-celled entities like bacteria as well as multicellular beings like plants and animals. The other terms describe parts or groups within an organism: tissue is a group of similar cells performing a function, an organ is a structure made of tissues that carries out a specific task, and a system is a set of organs working together to perform broader functions. Because "organism" names the whole living being, it's the best choice for identifying a living thing.

10. What does a tertiary consumer do?

A. Eats producers.

B. Eats primary consumers.

C. Eats secondary consumers.

D. Makes its own food.

Trophic levels and who eats whom define how energy moves through an ecosystem. A producer makes its own food, a primary consumer eats producers, a secondary consumer eats primary consumers, and a tertiary consumer eats secondary consumers. So a tertiary consumer is a predator that targets organisms that have already fed on others, placing it above the secondary level. That's why describing it as one that eats secondary consumers best captures its role in the food web. For context, in a chain like grass → insect → frog → snake → hawk, the snake is a tertiary consumer because it eats the frog (a secondary consumer), and the hawk would be quaternary if it eats the snake.

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://biologymarkingperiod3.examzify.com

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