

# Texas A&M University (TAMU) BIOL112 Introductory Biology II Lab Exam 1 Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

**Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.**

**ALL RIGHTS RESERVED.**

**No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.**

**Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.**

**SAMPLE**

# Table of Contents

<b>Copyright</b> .....	<b>1</b>
<b>Table of Contents</b> .....	<b>2</b>
<b>Introduction</b> .....	<b>3</b>
<b>How to Use This Guide</b> .....	<b>4</b>
<b>Questions</b> .....	<b>5</b>
<b>Answers</b> .....	<b>8</b>
<b>Explanations</b> .....	<b>10</b>
<b>Next Steps</b> .....	<b>16</b>

SAMPLE

# 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

SAMPLE

- 1. Which group within the Excavata Supergroup is specifically mentioned?**
  - A. Rhizarians**
  - B. Amoebozoa**
  - C. Euglenozoa**
  - D. Alveolates**
  
- 2. Why is biodiversity important?**
  - A. It complicates ecosystem management**
  - B. It decreases ecosystem resilience**
  - C. It contributes to ecosystem stability and services**
  - D. It reduces species competition**
  
- 3. How do Amoebozoans typically move?**
  - A. By using cilia**
  - B. By employing flagella**
  - C. Through pseudopodia**
  - D. By passive floating**
  
- 4. What does the endosymbiotic theory explain?**
  - A. Formation of multicellular organisms**
  - B. Origin of mitochondria and chloroplasts in eukaryotes**
  - C. Evolution of prokaryotic cells**
  - D. Development of membrane-bound organelles**
  
- 5. What is a key characteristic of ecosystems that have invasive species?**
  - A. Stability and balance of native populations**
  - B. Disruption of local ecosystems and competition with native species**
  - C. Increased biodiversity due to new species**
  - D. Lower rates of extinction among native species**

- 6. What is meant by genetic drift?**
- A. A process of artificial selection**
  - B. A type of natural selection based on survival of the fittest**
  - C. A mechanism of evolution referring to random changes in allele frequencies**
  - D. A method of gene therapy**
- 7. Which group does euglena belong to?**
- A. Stramenopiles**
  - B. Amoebozoans**
  - C. Excavata**
  - D. Rhizarians**
- 8. What defines an invasive species?**
- A. A native species that thrives in diverse habitats**
  - B. A non-native species that spreads and disrupts local ecosystems**
  - C. A species that is endangered in its native habitat**
  - D. A species that is beneficial and enhances biodiversity**
- 9. How is a food web best defined?**
- A. A simple linear chain of feeding relationships**
  - B. A complex network of feeding interactions between species**
  - C. A diagram focusing on only one species**
  - D. A representation of trophic levels in an ecosystem**
- 10. Which of the following is NOT a characteristic of autotrophs?**
- A. Capability to produce energy**
  - B. Dependency on other organisms for food**
  - C. Presence of chlorophyll in plants**
  - D. Utilization of sunlight or chemical reactions**

## Answers

SAMPLE

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

SAMPLE

## **Explanations**

SAMPLE

## 1. Which group within the Excavata Supergroup is specifically mentioned?

- A. Rhizarians
- B. Amoebozoa
- C. Euglenozoa**
- D. Alveolates

The Excavata Supergroup is a clade characterized by distinctive morphological and biochemical features, and it includes several important groups, one of which is Euglenozoa. This group is specifically noted for its unique flagella and often contains photosynthetic organisms, such as euglenoids, which have chloroplasts derived from secondary endosymbiosis. Euglenozoa's relevance in the context of the Excavata Supergroup lies in its significance in understanding evolutionary relationships and adaptations among protists. For instance, many euglenids are recognized for their dual lifestyle, exhibiting both heterotrophic and autotrophic behaviors, which illustrates the diversity within this group. This characteristic supports the importance of Euglenozoa in studies of ecology and evolutionary biology. The other groups, such as Rhizarians, Amoebozoa, and Alveolates, belong to different supergroups altogether, and while they may share some ecological niches and traits with Excavata, they do not represent the specific focus of this question about the Excavata Supergroup. The classification and understanding of Euglenozoa provide insight into the broader evolutionary patterns among eukaryotic organisms.

## 2. Why is biodiversity important?

- A. It complicates ecosystem management
- B. It decreases ecosystem resilience
- C. It contributes to ecosystem stability and services**
- D. It reduces species competition

Biodiversity is crucial because it enhances ecosystem stability and provides a range of services that are essential for maintaining ecological balance. A diverse array of species within an ecosystem ensures that various ecological functions can be performed efficiently. This includes processes such as nutrient cycling, pollination, pest control, and water purification, all of which are vital for human survival and well-being. Ecosystems with high biodiversity are generally more resilient to disturbances, such as climate change or natural disasters. This resilience arises because a variety of species can fulfill similar roles within the ecosystem; if one species is affected by a disease or environmental change, others may compensate, preventing significant disruptions to ecosystem functions. Therefore, biodiversity contributes not only to the stability of ecosystems but also to their ability to provide essential services that support life on Earth. In contrast to the correct answer, the other options describe negative aspects such as complications in ecosystem management and decreases in resilience, which do not reflect the benefits that biodiversity brings. The idea that biodiversity reduces species competition is misleading, as diverse ecosystems often evolve mechanisms that allow multiple species to coexist and utilize different resources efficiently.

### 3. How do Amoebozoans typically move?

- A. By using cilia
- B. By employing flagella
- C. Through pseudopodia**
- D. By passive floating

Amoebozoans are a group of protists characterized by their unique mode of movement and feeding, which involves the use of pseudopodia. Pseudopodia are temporary, foot-like extensions of the cell's cytoplasm that are formed by the rearrangement of the cytoskeleton. This structure allows Amoebozoans to move and also plays a crucial role in the locomotion process known as "amoeboid movement." Through the extension of pseudopodia, these organisms can crawl along surfaces, engulf food particles, or even traverse through different environments. This characteristic is fundamental to their biology, allowing them to adapt to a variety of ecological niches and demonstrating their unique method of locomotion compared to other organisms that use cilia or flagella for movement. Thus, the use of pseudopodia distinctly defines how Amoebozoans operate in their environments, making it the correct response to the question regarding their typical movement.

### 4. What does the endosymbiotic theory explain?

- A. Formation of multicellular organisms
- B. Origin of mitochondria and chloroplasts in eukaryotes**
- C. Evolution of prokaryotic cells
- D. Development of membrane-bound organelles

The endosymbiotic theory provides an explanation for the origin of mitochondria and chloroplasts in eukaryotic cells. According to this theory, these organelles originated from free-living prokaryotic cells that were engulfed by an ancestral eukaryotic cell. Over time, a mutually beneficial relationship developed between the host cell and the engulfed prokaryotes, eventually leading to the integration of these prokaryotic cells as organelles. Mitochondria are thought to have originated from an ancestral proteobacterium, while chloroplasts are believed to have originated from cyanobacteria. This theory is supported by the fact that both mitochondria and chloroplasts contain their own DNA, which is similar to bacterial DNA, and they replicate independently from the host cell's nuclear DNA. Additionally, these organelles have double membranes, a feature consistent with the engulfing process described in the endosymbiotic theory. Understanding this theory is crucial in the study of eukaryotic evolution, as it highlights the significance of symbiotic relationships in the emergence of complex life forms. The other options focus on different aspects of biology that are not directly addressed by the endosymbiotic theory.

5. What is a key characteristic of ecosystems that have invasive species?

A. Stability and balance of native populations

**B. Disruption of local ecosystems and competition with native species**

C. Increased biodiversity due to new species

D. Lower rates of extinction among native species

Invasive species are known for their ability to disrupt local ecosystems significantly. When an invasive species is introduced to a new environment, it often competes with native species for resources such as food and habitat. This competition can lead to declines in native populations, as the invasive species may have adaptations that allow them to thrive in those conditions, often outcompeting the native species. Additionally, invasive species can alter the physical environment, disrupt food webs, and introduce diseases, further destabilizing the ecosystem. The presence of invasive species typically results in a loss of biodiversity, as native species may not be equipped to cope with the new competition. This disruption is not only detrimental to the native species but can also have cascading effects on the ecosystem as a whole, leading to decreased stability and resilience. Therefore, the key characteristic of ecosystems with invasive species is indeed the disruption of local ecosystems and competition with native species.

6. What is meant by genetic drift?

A. A process of artificial selection

B. A type of natural selection based on survival of the fittest

**C. A mechanism of evolution referring to random changes in allele frequencies**

D. A method of gene therapy

Genetic drift refers to a mechanism of evolution that involves random changes in allele frequencies within a population. This phenomenon occurs due to chance events that lead to some alleles being passed on to the next generation more frequently than others, regardless of their impact on survival or reproduction. In small populations, the effects of genetic drift can be particularly pronounced, leading to significant fluctuations in allele frequencies over time. This randomness can result in the loss of genetic variation and even the fixation of certain alleles, which may not necessarily confer any advantage for survival. Genetic drift is distinct from natural selection, where allele frequencies change due to differential survival and reproduction based on advantageous traits. Understanding genetic drift is crucial in evolutionary biology as it emphasizes the role of random processes in shaping the genetic structure of populations, particularly in the absence of selective pressures.

## 7. Which group does euglena belong to?

- A. Stramenopiles
- B. Amoebozoans
- C. Excavata**
- D. Rhizarians

Euglena belongs to the group known as Excavata. This classification is based on certain distinct features of Euglena, specifically the unique morphology and the presence of a feeding groove, which are characteristic traits of the Excavata clade. Members of this group often have flagella, which helps with movement, and many are known for their ability to photosynthesize due to chloroplasts acquired through endosymbiotic events. In addition, Euglena has adaptations that allow it to thrive in diverse environments, often found in aquatic habitats. The classification within Excavata highlights both their evolutionary relationships and functional adaptations. This gives insight into their ecological roles and physiological characteristics as both protozoans and plant-like organisms.

## 8. What defines an invasive species?

- A. A native species that thrives in diverse habitats
- B. A non-native species that spreads and disrupts local ecosystems**
- C. A species that is endangered in its native habitat
- D. A species that is beneficial and enhances biodiversity

An invasive species is specifically defined as a non-native species that spreads and disrupts local ecosystems. This definition is crucial because invasive species often outcompete native species for resources, such as food, space, and light, leading to declines or even extinction of native populations. They can alter habitat structure and ecosystem functions, significantly impacting biodiversity and the health of ecosystems. The distinction lies in the non-native status of these species; they have been introduced to a new environment, either intentionally or accidentally, and thrive due to a lack of natural predators or competitors. This allows them to proliferate unchecked in their new surroundings, resulting in ecological imbalances. In contrast, native species that thrive in diverse habitats do not fit this definition, nor do endangered species, as they belong to habitats where they are originally found. Beneficial species that enhance biodiversity are also not considered invasive, as they typically support and stabilize ecosystems rather than disrupt them. Therefore, the defining characteristic of an invasive species is its non-native origin combined with its negative ecological impact on local environments.

## 9. How is a food web best defined?

- A. A simple linear chain of feeding relationships
- B. A complex network of feeding interactions between species**
- C. A diagram focusing on only one species
- D. A representation of trophic levels in an ecosystem

A food web is best defined as a complex network of feeding interactions between species. This definition captures the intricate relationships that exist in ecosystems, where multiple species are interconnected through various pathways of energy transfer. Unlike a food chain, which represents a singular, linear pathway of energy flow—from producers to various levels of consumers—a food web encompasses all possible feeding relationships and interactions within a community. This complex arrangement illustrates how different species, including plants, herbivores, carnivores, and decomposers, interact with one another in multiple ways. For instance, one species might serve as prey for several predators, while also competing with other species for the same food resources. This level of complexity is crucial for understanding ecosystem dynamics, as it provides insight into how changes in one species can influence others and the overall health and stability of the ecosystem. Other options do not adequately convey this complexity. A simple linear chain of feeding relationships does not account for the numerous interactions that occur in real ecosystems. Focusing on only one species overlooks the interconnectedness that defines a food web, and representing trophic levels in an ecosystem only illustrates the hierarchy of energy transfer without the detailed interactions among species that the food web represents.

## 10. Which of the following is NOT a characteristic of autotrophs?

- A. Capability to produce energy
- B. Dependency on other organisms for food**
- C. Presence of chlorophyll in plants
- D. Utilization of sunlight or chemical reactions

Autotrophs are organisms that can produce their own food, typically through photosynthesis or chemosynthesis. The distinguishing feature of autotrophs is their ability to synthesize organic compounds from inorganic substances, meaning they do not rely on other organisms for their energy or nutrient needs. The choice indicating dependency on other organisms for food is not a characteristic of autotrophs, as this trait pertains to heterotrophs, which obtain their nutrition by consuming organic material from other organisms. Autotrophs possess capabilities that allow them to convert sunlight or chemical energy into usable forms, like glucose, thereby establishing themselves as primary producers in their ecosystems.

## 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://tamu-biol112-labexam1.examzify.com>**

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

SAMPLE