

CANADIAN NATIONAL INSTITUTE OF HEALTH (CNIH) ENTRANCE PRACTICE EXAM (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

<https://cnihentrance.examzify.com>



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

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

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. What is a clade in biological terms?

- A. A taxonomic group that includes a common ancestor and all its descendants
- B. A system for classifying organisms based solely on physical characteristics
- C. A method for assessing genetic diversity among species
- D. A group that excludes any descendants of the common ancestor

2. What aspect of cytoplasm is essential for cell function?

- A. Provides electrical signals
- B. Surrounds and protects organelles
- C. Stores genetic material
- D. Produces energy for the cell

3. What is the main function of trypsin and pepsin in the digestive system?

- A. Break down lipids
- B. Break down carbohydrates
- C. Break down proteins
- D. Neutralize acids

4. How do strepto bacteria typically form?

- A. As single cells
- B. In clusters
- C. In chains
- D. In biofilms

5. What type of evolution involves adaptive radiation?

- A. Convergent evolution
- B. Allopatric speciation
- C. Co-evolution
- D. Microevolution

6. Which term describes the evolution of species that occurs without physical barriers?

- A. Allopatric speciation
- B. Sympatric speciation
- C. Parapatric speciation
- D. Peripatric speciation

7. What is horizontal gene transfer?

- A. Transfer of genes between the same species
- B. Species takes DNA from a different species
- C. Recombination of genes within a species
- D. Transfer of genes during cell division

8. Which of the following is an example of a saturated product?

- A. Olive Oil
- B. Butter
- C. Avocado Oil
- D. Corn Oil

9. Which scientist introduced the theory of uniformitarianism?

- A. Charles Lyell
- B. J Baptist Lamarck
- C. James Hutton
- D. Charles Darwin

10. What characterizes the G₀ phase of the cell cycle?

- A. The cell prepares for division
- B. The cell replicates its DNA
- C. The cell exits the cell cycle and can re-enter at any point
- D. The cell checks for errors in DNA

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. What is a clade in biological terms?

- A. A taxonomic group that includes a common ancestor and all its descendants**
- B. A system for classifying organisms based solely on physical characteristics
- C. A method for assessing genetic diversity among species
- D. A group that excludes any descendants of the common ancestor

A clade is defined as a taxonomic group that includes a common ancestor and all of its descendants. This concept is crucial in the field of cladistics, which is a method used in phylogenetics to classify living organisms based on common ancestry. By focusing on the concept of shared characteristics derived from a common ancestor, clades help illustrate the evolutionary relationships among organisms. Each clade represents a branch on the tree of life, encompassing all organisms that descend from that common ancestor. This inclusive approach ensures that evolutionary pathways are clearly shown, illustrating how various species are interrelated through evolutionary history. The correct identification of a clade not only aids in understanding taxonomy but also assists in studying the evolutionary processes and relationships among diverse forms of life. The other options reflect different concepts. For example, one suggests a classification system based on physical characteristics, which does not necessarily take evolutionary relationships into account. Another option pertains to assessing genetic diversity, which is a distinct aspect of biology. Lastly, the option that describes a group excluding descendants fails to align with the definition of a clade, as it directly contradicts the foundational principle that all descendants are included in a true clade.

2. What aspect of cytoplasm is essential for cell function?

- A. Provides electrical signals
- B. Surrounds and protects organelles**
- C. Stores genetic material
- D. Produces energy for the cell

The aspect of cytoplasm that is essential for cell function is its role in surrounding and protecting organelles. The cytoplasm is a gel-like substance within the cell membrane, providing a medium in which all organelles reside. This environment is critical for maintaining the structure of the cell and ensuring that organelles can operate effectively without being disrupted by external factors. In addition to providing structural support, the cytoplasm facilitates the movement of materials around the cell, allowing for the distribution of nutrients and the removal of waste products. It also contains various enzymes and molecules that are involved in metabolic processes. Therefore, its protective and supportive role is key to the overall functionality and health of the cell.

3. What is the main function of trypsin and pepsin in the digestive system?

- A. Break down lipids
- B. Break down carbohydrates
- C. Break down proteins**
- D. Neutralize acids

Trypsin and pepsin play crucial roles in the digestive system, specifically in the process of protein digestion. Both of these enzymes are proteases, which means their primary function is to cleave the peptide bonds in proteins, breaking them down into smaller peptides and ultimately into amino acids that the body can absorb and utilize for various functions, including building and repairing tissues. Pepsin is secreted in an inactive form known as pepsinogen by the gastric mucosa and is activated in the acidic environment of the stomach. This activation allows pepsin to begin the digestion of proteins in the food we consume. Trypsin, on the other hand, is produced in the pancreas and secreted into the small intestine in its inactive form (trypsinogen). Once it reaches the small intestine, it is activated by another enzyme (enterokinase), and it continues the work initiated by pepsin, further breaking down proteins into even smaller peptides. Understanding that these enzymes specifically target proteins clarifies why the main function of trypsin and pepsin is to break down proteins rather than lipids, carbohydrates, or neutralizing acids. Their effectiveness in protein digestion is essential for proper nutrition and absorption of amino acids essential for bodily functions

4. How do strepto bacteria typically form?

- A. As single cells
- B. In clusters
- C. In chains**
- D. In biofilms

Streptobacteria are known for their characteristic arrangement when they reproduce and grow. They typically divide by binary fission, a process where a single cell splits into two identical cells. Unlike other types of bacteria that may cluster together or form irregular shapes, streptobacteria tend to remain connected after division, leading to a chain-like formation. This chain structure is a hallmark of the genus and is a fundamental characteristic that differentiates them from other bacterial arrangements. Understanding this chain formation is crucial in microbiology, as the morphology of bacteria can influence their identification, classification, and the type of infections they may cause. Recognizing this characteristic helps in both laboratory settings and clinical diagnoses. The other arrangements, such as clusters or single cells, do not accurately represent how streptobacteria organize themselves after division.

5. What type of evolution involves adaptive radiation?

- A. Convergent evolution
- B. Allopatric speciation**
- C. Co-evolution
- D. Microevolution

Adaptive radiation is a process where an ancestral species rapidly diversifies into a wide variety of forms to adapt to different environments. This is often a result of allopatric speciation, which occurs when a population is divided by geographic barriers, leading to the formation of new species as they adapt to their unique environments. In allopatric speciation, the geographical separation results in the isolated populations undergoing different evolutionary pressures, which can lead to significant changes in morphology, behavior, and genetics. When these separated populations adapt to various ecological niches, they exhibit the characteristic divergent evolution seen in adaptive radiation. The other types of evolution listed do not specifically involve the rapid diversification into multiple forms from a single ancestor in response to ecological opportunities. Convergent evolution refers to unrelated species evolving similar traits due to similar environmental pressures, co-evolution involves two or more species evolving in response to each other, and microevolution refers to small-scale evolutionary changes within a population. Thus, allopatric speciation is the most relevant context for understanding adaptive radiation.

6. Which term describes the evolution of species that occurs without physical barriers?

- A. Allopatric speciation
- B. Sympatric speciation**
- C. Parapatric speciation
- D. Peripatric speciation

The term that accurately describes the evolution of species that occurs without physical barriers is sympatric speciation. This process involves the emergence of new species from a single ancestral species while remaining in the same geographical area. In sympatric speciation, reproductive isolation occurs due to factors such as behavioral differences, ecological preferences, or genetic mutations that segregate populations even when they coexist in the same environment. This form of speciation contrasts with allopatric speciation, which occurs when populations are separated by physical barriers, leading to the divergence of species as they adapt to different environments. Parapatric speciation involves populations that are partially separated and experience differing selection pressures along a gradient, while peripatric speciation is a similar concept but involves a smaller population becoming isolated at the edge of the range. Understanding these distinctions helps clarify how species evolve in various contexts, especially in relation to their environments and interactions.

7. What is horizontal gene transfer?

- A. Transfer of genes between the same species
- B. Species takes DNA from a different species**
- C. Recombination of genes within a species
- D. Transfer of genes during cell division

Horizontal gene transfer refers to the process by which an organism incorporates genetic material from another organism without being its offspring, allowing for the exchange of genes across different species. This is a significant mechanism in microbial genetics and evolution, as it can confer new traits, such as antibiotic resistance, to recipient organisms. Unlike vertical gene transfer, which occurs when genes are passed from parent to offspring during reproduction, horizontal gene transfer allows for a more rapid adaptation to environmental pressures. Due to its nature, this process often occurs in prokaryotes, such as bacteria, through mechanisms like transformation, transduction, and conjugation. It can significantly impact evolutionary dynamics, as it enables genetic variation and innovation that is not limited to lineage-related changes. Thus, the idea that a species can acquire DNA from a different species encapsulates the core principle of horizontal gene transfer effectively.

8. Which of the following is an example of a saturated product?

- A. Olive Oil
- B. Butter**
- C. Avocado Oil
- D. Corn Oil

Butter is an example of a saturated product because it primarily consists of saturated fatty acids. Saturated fats have no double bonds between carbon atoms in their fatty acid chains, which means all available carbon bonds are saturated with hydrogen atoms. This results in a more solid state at room temperature, giving butter its characteristic firmness and texture. In contrast, other options such as olive oil, avocado oil, and corn oil contain a higher proportion of unsaturated fats. Unsaturated fats have one or more double bonds in their fatty acid chains, leading to a liquid state at room temperature. Therefore, they do not qualify as saturated products. Understanding the differences between saturated and unsaturated fats is essential for dietary choices and nutritional knowledge.

9. Which scientist introduced the theory of uniformitarianism?

- A. Charles Lyell**
- B. J Baptist Lamarck
- C. James Hutton
- D. Charles Darwin

The theory of uniformitarianism, which posits that the Earth has been shaped by the same natural processes still in operation today over vast periods of time, was significantly advanced by Charles Lyell. In his work "Principles of Geology," Lyell argued that we can understand Earth's history and geological formations by studying current geological processes, like erosion and sedimentation, rather than resorting to catastrophic events. This concept was crucial in changing the way scientists understood geological time and processes, allowing for a more gradual understanding of Earth's history rather than one dominated by sudden, large-scale changes. While James Hutton also contributed to the foundation of this theory, it was Lyell who effectively popularized and formulated it in a way that influenced future geological thought. Hence, Lyell is often credited with formally introducing and solidifying uniformitarianism as an essential principle in geology.

10. What characterizes the G0 phase of the cell cycle?

- A. The cell prepares for division
- B. The cell replicates its DNA
- C. The cell exits the cell cycle and can re-enter at any point**
- D. The cell checks for errors in DNA

The G0 phase is a distinct state of the cell cycle characterized by cells entering a quiescent state where they exit from the active cycle of division and proliferation. In the G0 phase, cells are metabolically active but not actively preparing to divide. This phase can be thought of as a resting or dormant phase, allowing cells to exit the cycle either temporarily or for extended periods. Cells in the G0 phase maintain the ability to re-enter the cell cycle in response to certain signals, such as growth factors or other stimuli, which prompts them to resume the normal cycle of division. This capability is particularly important in tissue repair and regeneration, where cells may be required to re-enter active division after a period of inactivity. The other phases mentioned, such as preparation for division, DNA replication, or error checking in DNA, do not accurately represent the G0 phase; rather they refer to processes occurring in the active phases of the cell cycle (such as G1, S, and G2). In summary, the G0 phase's defining characteristic is that it serves as a point where the cell can exit the cycle and has the potential to re-enter it when conditions are favorable.

SAMPLE

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://cnihentrance.examzify.com>

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

SAMPLE