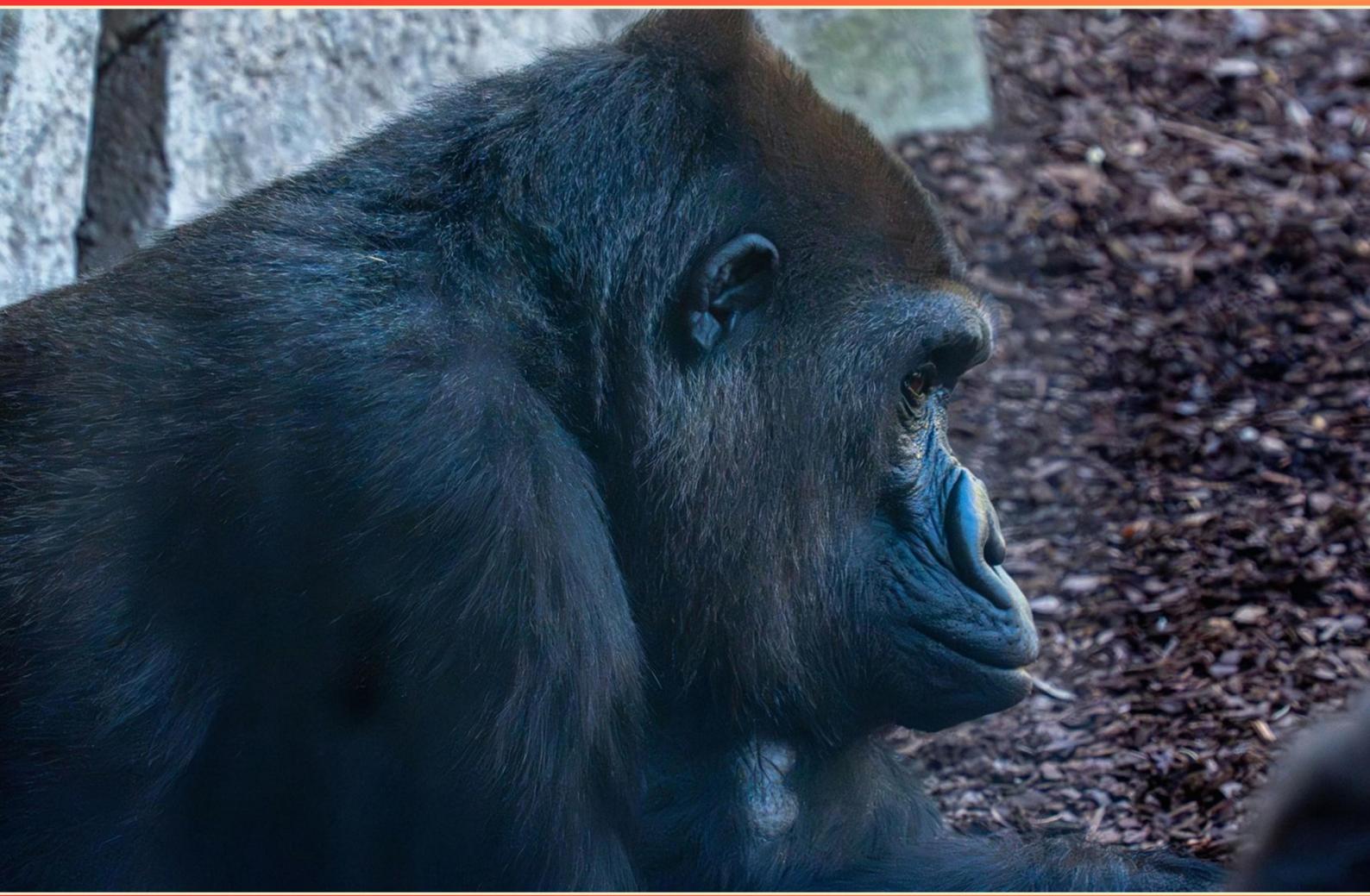
BIOLOGICAL ANTHROPOLOGY EXAM 1 PRACTICE (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://bioanthropology1.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 15

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.

SAMPLE

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!

SAMPLE

Questions

SAMPLE

1. Which geologist studied rock layering (stratigraphy) and advocated uniformitarianism?

A. James Hutton

B. Charles Lyell

C. Georges Cuvier

D. Louis Agassiz

2. Which principle states that animals behave preferentially toward their genetic kin, as proposed by Hamilton?

A. Inclusive fitness

B. Group selection

C. Adaptationism

D. Kin selection

3. Which base pairs with cytosine in nucleic acids?

A. Guanine

B. Adenine

C. Thymine

D. Uracil

4. Which term describes single-celled organisms in which genetic material is not separated by a nucleus from the rest of the cell?

A. Eukaryotes

B. Cytoplasm

C. Prokaryotes

D. Nucleus

5. Which naturalist proposed that animals migrate and adapt to different climates but offered no mechanism for evolution, and argued that New World fauna were weaker and smaller?

A. Buffon

B. Cuvier

C. Lamarck

D. Darwin

SAMPLE

6. Uracil replaces thymine in which nucleic acid?

A. DNA

B. RNA

C. Proteins

D. Carbohydrates

7. Which neurodevelopmental disorder is caused by CGG trinucleotide expansion on the X chromosome affecting the FMR1 gene?

A. PKU

B. Red-green color blindness

C. Tay-Sachs disease

D. Fragile X syndrome

8. Which term describes an organelle in the cytoplasm consisting of a folded membrane; increased space for metabolic reactions; some have knobs called rough ER?

A. Cytoplasm

B. Nucleus

C. Endoplasmic reticulum

D. Mitochondria

9. Which term refers to the structural and functional unit containing the cell's energy-producing organelles and their own DNA?

A. Nucleus

B. Mitochondria

C. Cytoplasm

D. Endoplasmic reticulum

10. Which model describes rapid bursts of change followed by long periods of stasis?

A. Macroevolution

B. Punctuated equilibrium

C. Adaptationism

D. Reductionism

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Which geologist studied rock layering (stratigraphy) and advocated uniformitarianism?

A. James Hutton

B. Charles Lyell

C. Georges Cuvier

D. Louis Agassiz

Stratigraphy—reading Earth's history through rock layers—is best connected to the idea that the same natural processes we see today have always shaped the planet, just acting over immense timescales. James Hutton studied rock layering in Scotland and argued that Earth's features result from gradual processes like sediment deposition, uplift, and erosion operating over very long periods. From this, he formulated uniformitarianism: the present is the key to the past, meaning the same forces we observe now have been at work throughout Earth's history. While others like Charles Lyell later popularized and expanded this view, Hutton is the geologist who first linked visible layering with the long, slow processes that shape the world. The other figures represent different viewpoints—some emphasizing sudden catastrophes or specific phenomena like ice ages—but they don't align as directly with both stratigraphy and this gradualist perspective.

2. Which principle states that animals behave preferentially toward their genetic kin, as proposed by Hamilton?

A. Inclusive fitness

B. Group selection

C. Adaptationism

D. Kin selection

Kin selection is the principle that animals behave preferentially toward their genetic kin because helping relatives can promote the actor's genes in the next generation. This idea, proposed by Hamilton, is captured by the idea that altruistic acts are favored when the genetic relatedness to the recipient (r) times the benefit to the recipient (b) exceeds the cost to the actor (c): $r \times b > c$. Inclusive fitness is related, as it combines an individual's own reproduction with the effects of helping relatives, but kin selection specifically names the behavior toward kin. Group selection and adaptationism describe different concepts (selection on groups or traits as adaptations) and aren't the term for this kin-based behavior.

3. Which base pairs with cytosine in nucleic acids?

A. Guanine

B. Adenine

C. Thymine

D. Uracil

Base pairing in nucleic acids depends on complementary hydrogen bonding and fitting shapes. Cytosine pairs with guanine because their functional groups align to form three hydrogen bonds, giving a stable C–G pair in both DNA and RNA. The other bases pair with different partners: adenine pairs with thymine in DNA (or with uracil in RNA), not with cytosine; thymine pairs with adenine; uracil pairs with adenine. So the partner for cytosine is guanine.

SAMPLE

4. Which term describes single-celled organisms in which genetic material is not separated by a nucleus from the rest of the cell?

A. Eukaryotes

B. Cytoplasm

C. Prokaryotes

D. Nucleus

The key concept is how genetic material is organized inside cells. Prokaryotes are single-celled organisms whose DNA is not enclosed by a membrane-bound nucleus; instead, the genetic material sits in the cytoplasm in a region called the nucleoid, and their cells lack most membrane-bound organelles. This contrasts with eukaryotes, which have a nucleus that keeps DNA separate from the rest of the cell. A nucleus is the membrane-bound compartment in eukaryotic cells, and cytoplasm refers to the cell's interior fluid rather than a type of organism. Therefore, the term that describes these organisms is prokaryotes.

5. Which naturalist proposed that animals migrate and adapt to different climates but offered no mechanism for evolution, and argued that New World fauna were weaker and smaller?

A. Buffon

B. Cuvier

C. Lamarck

D. Darwin

This question tests understanding of pre-D Darwinian ideas about how species change. Buffon argued that climate and geography could shape animals, with species migrating and adapting to different environments, but he did not provide a mechanism that explains how traits are inherited and accumulate over generations. He also claimed that New World fauna were weaker and smaller than Old World fauna, reflecting a regional bias rather than a universal process of evolution. This sets Buffon apart from others: Cuvier stressed fixed types and catastrophic change, Lamarck proposed a mechanism (inheritance of acquired traits) for evolution, and Darwin would later articulate natural selection as the driving process.

6. Uracil replaces thymine in which nucleic acid?

A. DNA

B. RNA

C. Proteins

D. Carbohydrates

Uracil replaces thymine in RNA. RNA contains adenine, guanine, cytosine, and uracil, while DNA uses thymine instead of uracil. This difference aligns with RNA's structure and role (ribose sugar and typically single-stranded) and with thymine's greater chemical stability (thymine is basically methylated uracil) that suits DNA's role in long-term genetic storage. Proteins and carbohydrates are not nucleic acids, so they don't contain these bases.

SAMPLE

7. Which neurodevelopmental disorder is caused by CGG trinucleotide expansion on the X chromosome affecting the FMR1 gene?

A. PKU

B. Red-green color blindness

C. Tay-Sachs disease

D. Fragile X syndrome

Fragile X syndrome is caused by an abnormal expansion of CGG trinucleotide repeats in the FMR1 gene on the X chromosome. This expansion triggers hypermethylation and silencing of FMR1, leading to a deficiency of the FMRP protein that regulates synaptic development and plasticity. The result is a neurodevelopmental disorder characterized by intellectual disability, learning and behavioral challenges, and features often seen in autism; males are typically more severely affected due to having only one X chromosome, while females show a wider range of severity because of X-inactivation. The repeat length also influences severity and can expand in future generations (anticipation).

8. Which term describes an organelle in the cytoplasm consisting of a folded membrane; increased space for metabolic reactions; some have knobs called rough ER?

A. Cytoplasm

B. Nucleus

C. Endoplasmic reticulum

D. Mitochondria

The endoplasmic reticulum is an organelle in the cytoplasm made of a network of folded membranes, which greatly increases surface area for metabolic reactions such as protein and lipid synthesis. When ribosomes are attached to its surface, it appears rough and is specialized for protein synthesis and processing, while regions without ribosomes (smooth ER) handle lipid synthesis and detoxification. The other options don't describe this folded-membrane system: the cytoplasm is the general fluid inside the cell, the nucleus is a separate membrane-bound compartment containing DNA, and mitochondria are energy-producing organelles with their own membranes and cristae rather than a single folded-membrane network with rough regions.

9. Which term refers to the structural and functional unit containing the cell's energy-producing organelles and their own DNA?

A. Nucleus

B. Mitochondria

C. Cytoplasm

D. Endoplasmic reticulum

This question tests recognizing organelles that are semi-autonomous and carry their own genetic material, a hallmark of mitochondria. Mitochondria are the cell's energy factories, housing the machinery that converts nutrients into ATP. They contain circular DNA and their own ribosomes, and they replicate independently of the cell, reflecting their ancient endosymbiotic origin. The inner membrane folds, called cristae, increase surface area for the electron transport chain and ATP production, while the matrix hosts enzymes of the Krebs cycle. In contrast, the nucleus stores genetic material and directs cellular activities but does not perform energy production; the cytoplasm is the fluid where many metabolic processes occur; and the endoplasmic reticulum is involved in protein and lipid synthesis, not ATP generation.

SAMPLE

10. Which model describes rapid bursts of change followed by long periods of stasis?

A. Macroevolution

B. Punctuated equilibrium

C. Adaptationism

D. Reductionism

Punctuated equilibrium describes rapid bursts of evolutionary change followed by long periods of stasis. This idea helps explain fossil records where new species appear relatively suddenly and then remain largely unchanged for long stretches, suggesting most significant changes happen in brief, punctuated events often tied to speciation. It contrasts with a purely gradual view of evolution and aligns with observations of long-lasting morphological stability in many lineages. The other terms refer to broader concepts or methodological approaches rather than the tempo of evolutionary change: macroevolution is a big-picture study of evolution above the species level, adaptationism centers on traits as adaptive explanations, and reductionism focuses on breaking systems down into simpler parts rather than describing patterns of change over time.

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://bioanthropology1.examzify.com

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

SAMPLE