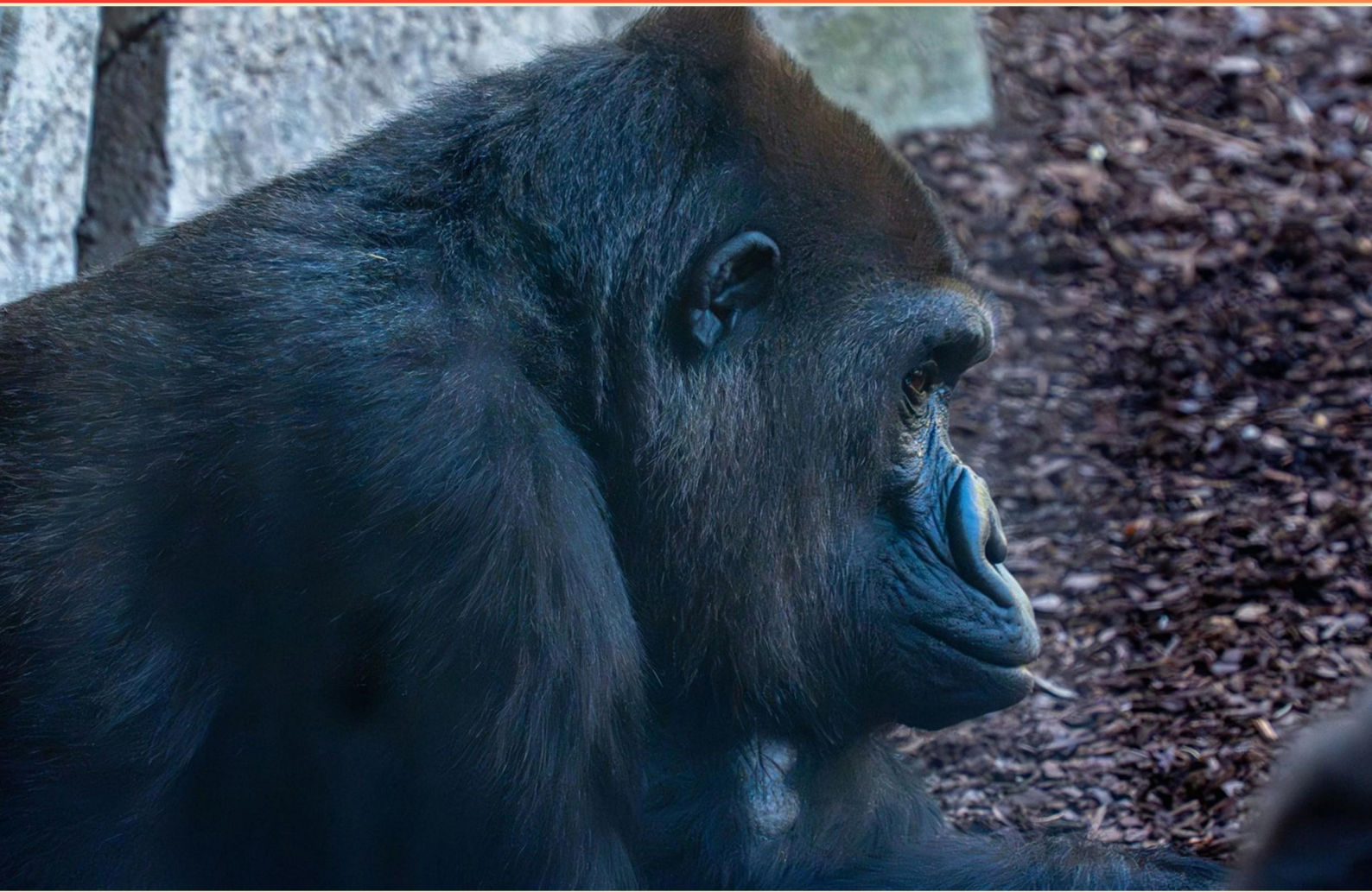


BIOLOGICAL ANTHROPOLOGY EXAM 1 PRACTICE (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

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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. Temporary dramatic reduction in size of a population or species.**
 - A. Genetic bottleneck
 - B. Sexual selection
 - C. Gene flow
 - D. Directional selection
- 2. During interphase, DNA exists in a diffuse form known as what?**
 - A. Chromosome
 - B. Chromatin
 - C. Genome
 - D. Nucleic acid
- 3. What is the starting assumption in scientific inquiry, often formalized as the null hypothesis?**
 - A. Null hypothesis
 - B. Hardy-Weinberg equilibrium
 - C. Punctuated equilibrium
 - D. Macroevolution
- 4. Which process is described as the exchange of genetic material between homologous chromosomes during the first prophase of meiosis?**
 - A. Crossing over
 - B. Recombination
 - C. Nondisjunction error
 - D. Zygote
- 5. Mating between close relatives.**
 - A. Sexual selection
 - B. Inbreeding
 - C. Gene flow
 - D. Genetic drift

- 6. Which term describes differential reproductive success within one sex?**
- A. Sexual selection
 - B. Gene flow
 - C. Stabilizing selection
 - D. Inbreeding
- 7. What term refers to an interbreeding group of organisms?**
- A. Species
 - B. Community
 - C. Ecosystem
 - D. Population
- 8. Absence of clotting factor protein in blood with vulnerability to hemorrhage and severe joint damage is characteristic of which condition?**
- A. Huntington disease
 - B. Hemophilia
 - C. X-linked disorders
 - D. Cystic fibrosis
- 9. Which autosomal recessive condition causes accumulation of phenylalanine leading to intellectual disability if untreated?**
- A. Tay-Sachs disease
 - B. Phenylketonuria (PKU)
 - C. Red-green color blindness
 - D. Lactose tolerance
- 10. What term is used for the complete set of chromosomes observed in a karyotype?**
- A. Locus
 - B. Karyotype
 - C. Zygote
 - D. Autosomes

Answers

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

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Explanations

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1. Temporary dramatic reduction in size of a population or species.

A. Genetic bottleneck

B. Sexual selection

C. Gene flow

D. Directional selection

A genetic bottleneck describes a temporary dramatic reduction in population size that leads to a loss of genetic diversity. When numbers plummet quickly, only a random subset of the original alleles survives. That amplifies genetic drift and can fix or lose alleles by chance, often resulting in higher relatedness among survivors and potential inbreeding. Even after the population recovers in size, the genetic makeup may remain altered compared to before the bottleneck, which can affect future adaptability. This differs from sexual selection (traits favored by mate choice), gene flow (movement of genes between populations), or directional selection (consistent favoring of one trait), none of which describe a sudden, drastic drop in population size.

2. During interphase, DNA exists in a diffuse form known as what?

A. Chromosome

B. Chromatin

C. Genome

D. Nucleic acid

During interphase, DNA is not packed into visible chromosomes. It exists as chromatin, a diffuse complex of DNA wrapped around histone proteins. This looser organization keeps genes accessible for transcription and replication, allowing the cell to read and copy its genetic information. Only as the cell prepares to divide does chromatin condense into the dense chromosomes seen under the microscope. The other terms refer to broader ideas (the whole set of genetic material or the chemical nature of DNA/RNA) rather than the organized state of DNA in the nucleus during interphase.

3. What is the starting assumption in scientific inquiry, often formalized as the null hypothesis?

A. Null hypothesis

B. Hardy-Weinberg equilibrium

C. Punctuated equilibrium

D. Macroevolution

The starting assumption in scientific inquiry is that there is no effect or difference—this is the null hypothesis. In practice, you set up a statement that represents “no change” or “no association” (for example, a new drug has no effect on blood pressure, or two groups have the same average outcome). This default position provides a clear baseline to test against. Through data collection and statistical analysis, you evaluate whether the evidence is strong enough to reject this neutral stance in favor of an alternative that proposes a real effect or difference. Importantly, statistics don’t prove the null; they either fail to reject it or reject it in favor of the alternative. Other terms listed refer to specific ideas in biology, not the general starting point for inquiry. Hardy-Weinberg equilibrium describes expected allele frequencies in a population under no evolutionary forces; punctuated equilibrium is a pattern of evolutionary change characterized by long periods of little change punctuated by brief bursts of change; macroevolution refers to major evolutionary changes that occur above the species level. These are distinct concepts, whereas the null hypothesis is the foundational default assumption used to test scientific questions.

4. Which process is described as the exchange of genetic material between homologous chromosomes during the first prophase of meiosis?

- A. Crossing over**
- B. Recombination
- C. Nondisjunction error
- D. Zygote

Crossing over is the exchange of genetic material between homologous chromosomes during prophase I of meiosis. When homologs pair up in synapsis, non-sister chromatids within each tetrad can break and rejoin, swapping segments and creating recombinant chromatids with mixed maternal and paternal alleles. This occurs at sites called chiasmata and is driven by the meiotic recombination machinery that processes double-strand breaks. The outcome is greater genetic variation in gametes, a hallmark of meiosis. Nondisjunction is about chromosome separation errors, Zygote is a fertilized cell, and recombination is the broader concept that includes crossing over but doesn't specify the physical exchange during prophase I.

5. Mating between close relatives.

- A. Sexual selection
- B. Inbreeding**
- C. Gene flow
- D. Genetic drift

Inbreeding is mating between relatives. This pattern raises the chance that an offspring will inherit two copies of the same allele from a common ancestor, increasing homozygosity across the genome. When individuals share more alleles, recessive deleterious alleles are more likely to pair up and be expressed, which can reduce fitness—a situation known as inbreeding depression. This concept is distinct from sexual selection (traits that boost mating success), gene flow (movement of genes between populations), and genetic drift (random changes in allele frequencies, especially in small populations).

6. Which term describes differential reproductive success within one sex?

- A. Sexual selection**
- B. Gene flow
- C. Stabilizing selection
- D. Inbreeding

Sexual selection explains differential reproductive success that arises from traits and behaviors that help individuals obtain mates. It often plays out within the same sex, such as males competing with each other for access to females, or females preferring certain mates, which shapes which individuals reproduce more. Over time, this can produce pronounced secondary sexual traits and sexual dimorphism, even if those traits don't improve survival. The other terms describe different evolutionary processes. Gene flow is about genes moving between populations, not about mating success within a sex. Stabilizing selection reduces variation around an average trait value, not differential reproduction based on mating success. Inbreeding refers to mating among relatives and increases homozygosity without focusing on differential reproductive success among individuals.

7. What term refers to an interbreeding group of organisms?

- A. Species
- B. Community
- C. Ecosystem
- D. Population**

An interbreeding group of organisms is a population. It refers to individuals of the same species that live in the same area and mate with one another, sharing a local gene pool. This concept matters because population-level processes—such as gene flow, genetic drift, and selection—shape allele frequencies over time within a specific locale. The other terms describe broader or different ideas: a species is the taxonomic category that groups potentially interbreeding populations and is often defined by reproductive isolation; a community includes all the living species in an area; an ecosystem adds the physical environment and energy flows to those living components. So the term that specifically captures the local interbreeding group is population.

8. Absence of clotting factor protein in blood with vulnerability to hemorrhage and severe joint damage is characteristic of which condition?

- A. Huntington disease
- B. Hemophilia**
- C. X-linked disorders
- D. Cystic fibrosis

A deficiency of a blood clotting factor leads to abnormal bleeding and, with repeated bleeding into joints, severe joint damage. This pattern fits hemophilia, in which the body lacks sufficient clotting factor VIII (hemophilia A) or IX (hemophilia B). Without these factors, the coagulation cascade can't form a proper clot, so even minor injuries cause prolonged bleeding and can cause blood to accumulate in joints, causing pain and damage over time. Hemophilia is typically inherited as an X-linked recessive condition, which explains why it often appears in males and can run in families. Huntington disease is a neurodegenerative disorder with motor, cognitive, and behavioral symptoms, not primarily a clotting problem. Cystic fibrosis involves a defect in a chloride channel affecting mucus production and organ function, not clotting. Saying "X-linked disorders" is too broad a descriptor and doesn't specify the clotting-factor deficiency responsible for this bleeding pattern.

9. Which autosomal recessive condition causes accumulation of phenylalanine leading to intellectual disability if untreated?

- A. Tay-Sachs disease
- B. Phenylketonuria (PKU)**
- C. Red-green color blindness
- D. Lactose tolerance

This question tests understanding of a metabolic disorder caused by an autosomal recessive enzyme defect that leads to buildup of a specific amino acid and brain damage if not treated. Phenylketonuria results from a deficiency of phenylalanine hydroxylase, so phenylalanine cannot be converted to tyrosine. The amino acid then accumulates in the blood and brain, causing intellectual disability and other neurodevelopmental issues if the condition isn't managed early. Newborn screening detects elevated phenylalanine levels, allowing early dietary treatment that restricts phenylalanine and provides tyrosine as an essential amino acid. Avoiding phenylalanine-containing foods (and sometimes aspartame, which contains phenylalanine) helps prevent damage. Tay-Sachs involves a different substrate accumulation and presents with neurodegeneration due to GM2 buildup; red-green color blindness is not autosomal and isn't about phenylalanine metabolism; lactose tolerance isn't a metabolic disorder causing intellectual disability.

10. What term is used for the complete set of chromosomes observed in a karyotype?

A. Locus

B. Karyotype

C. Zygote

D. Autosomes

The main idea here is understanding chromosome terminology. The complete set of chromosomes observed in a karyotype is called the karyotype—the full chromosome complement, including number and structure, as seen in a cell's metaphase spread. A karyogram is the arranged image of those chromosomes. Locus refers to a gene's position on a chromosome, autosomes are the non-sex chromosomes, and a zygote is a fertilized egg. So the best term is karyotype.

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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://bioanthropology1.examzify.com>

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

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