Biological Anthropology Exam 1 Practice (Sample)

Study Guide

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. A group of organisms assigned to a particular category

A. Taxonomy

B. Paradigm

C. Taxon

D. Immutability

2. What term describes somatic cell division that produces two identical daughter cells?

A. Cytokinesis

B. DNA replication

C. Mitosis

D. Binary fission

3. Which autosomal recessive disorder results from accumulation of a lipid that damages the nervous system in infancy?

A. Tay-Sachs disease

B. Phenylketonuria (PKU)

C. Achondroplasia

D. Fragile X syndrome

4. Which naturalist traveled extensively and developed the theory of evolution by natural selection, drawing on studies of finches in the Galapagos Islands?

A. Wallace

B. Lyell

C. Huxley

D. Darwin

5. What term refers to the complete set of genetic material in an organism, including all genes and noncoding sequences?

A. Phenotype

B. Genome

C. Ancient DNA

D. Recessive

6. X-linked disorders are genetic conditions caused by mutations on the X chromosome and are almost always expressed in males.

A. X-linked disorders

B. Autosomal recessive disease

C. Autosomal dominant disease

D. Mitochondrial inheritance

7. Which field focuses on the study of human remains and their context for legal investigations, often involving modern crime scenes?

A. Bioarchaeology

B. Paleopathology

C. Osteology

D. Forensic anthropology

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

A. Chromosome

B. Chromatin

C. Genome

D. Nucleic acid

9. Purine base that bonds with cytosine.

A. Adenine

B. Thymine

C. Uracil

D. Guanine

10. Molecules that form the basic building blocks of protein; there are 20; 9 are essential (cannot be synthesized by the body) are called what?

A. Polypeptide

B. Genetic code

C. Amino acids

D. Codon

Answers

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

Explanations

1. A group of organisms assigned to a particular category

A. Taxonomy

B. Paradigm

C. Taxon

D. Immutability

The concept here is identifying the unit used for classification. A taxon is the named group of organisms that is placed into a specific category within a classification system, at any rank from species up to domain. So when we say "a group of organisms assigned to a particular category," we're referring to that group itself—the taxon. For example, Homo sapiens is a taxon at the species level within the genus Homo. In contrast, taxonomy is the field that studies and describes these groups, not the group itself. A paradigm is a framework or model guiding scientific thinking, not a naming unit. Immutability would imply the group never changes, which isn't accurate in biology where classifications can shift with new evidence.

2. What term describes somatic cell division that produces two identical daughter cells?

A. Cytokinesis

B. DNA replication

C. Mitosis

D. Binary fission

Mitosis is the process by which a eukaryotic somatic cell divides its nucleus to produce two genetically identical daughter nuclei, usually followed by cytokinesis that splits the cytoplasm and yields two separate cells. This ensures each daughter cell inherits an identical set of chromosomes after DNA has been replicated earlier in the cell cycle. Cytokinesis alone handles the cytoplasmic split, not the nuclear division. DNA replication duplicates the genome but does not divide the cell. Binary fission is how many prokaryotes divide, not the typical mechanism for somatic cells in eukaryotes.

3. Which autosomal recessive disorder results from accumulation of a lipid that damages the nervous system in infancy?

A. Tay-Sachs disease

B. Phenylketonuria (PKU)

C. Achondroplasia

D. Fragile X syndrome

Lipid buildup in neurons due to a lysosomal storage defect is the hallmark. Tay-Sachs disease results from a deficiency of the enzyme hexosaminidase A, causing GM2 ganglioside to accumulate in neuronal lysosomes and lead to progressive neurodegeneration in infancy. This pattern fits autosomal recessive inheritance, where two defective copies are needed. By contrast, PKU is also autosomal recessive but involves accumulation of phenylalanine, not a lipid, and causes broad developmental issues without the characteristic lipid-driven neurodegeneration. Achondroplasia is a skeletal disorder from FGFR3 mutation, not related to lipid storage in the nervous system, and Fragile X is X-linked with CGG repeats affecting neural development rather than lipid accumulation.

4. Which naturalist traveled extensively and developed the theory of evolution by natural selection, drawing on studies of finches in the Galapagos Islands?

A. Wallace

B. Lyell

C. Huxley

D. Darwin

The idea being tested is how Darwin linked extensive travel and careful observation to the explanation of how new species arise, using the Galapagos finches as a key example. Darwin's voyage around the world, especially his time studying the Galapagos Islands, gave him firsthand evidence that related species can vary in meaningful ways across different environments. The finches on these islands showed different beak shapes adapted to specific food sources, illustrating how natural selection can favor traits that improve survival and reproduction in a given environment. Over many generations, such selective pressures can lead to divergence and the emergence of new species, which Darwin synthesized into the theory of evolution by natural selection. While Alfred Russel Wallace independently conceived a theory of natural selection, the finch observations from the Galapagos are uniquely associated with Darwin's development of the idea. The other figures are influential in related contexts—Lyell in geology and Huxley in advocacy of Darwin's ideas—but the Galapagos finch work specifically anchors Darwin's explanation of how evolution proceeds.

5. What term refers to the complete set of genetic material in an organism, including all genes and noncoding sequences?

A. Phenotype

B. Genome

C. Ancient DNA

D. Recessive

Genomes are the complete set of genetic material in an organism, including all genes and noncoding sequences. This means every bit of DNA (or RNA in some viruses) present in the cell—coding regions that produce proteins and the noncoding regions that regulate when and how those genes are expressed. Grasping the idea of the genome gives you the full blueprint of an organism, not just the parts that code for proteins or traits you can see. This is what sets genome apart from phenotype, which refers to the observable traits; from ancient DNA, which is genetic material recovered from long-deceased samples and may not reflect the organism's full present genome; and from recessive, which describes a pattern of allele contribution rather than the entire genetic content. In humans, you'd consider both the nuclear genome and the mitochondrial genome together to understand the complete genetic material of cellular life.

6. X-linked disorders are genetic conditions caused by mutations on the X chromosome and are almost always expressed in males.

A. X-linked disorders

B. Autosomal recessive disease

C. Autosomal dominant disease

D. Mitochondrial inheritance

X-linked inheritance explains why these disorders are seen mostly in males. Males have only one X chromosome, so a single mutation on that X is enough to express the condition. Females have two X chromosomes, so a normal copy on the second X can often mask the defect, making them carriers rather than affected. This creates the typical pattern where males are affected more frequently, while autosomal or mitochondrial patterns would not produce that same male-biased expression. So the best match is X-linked disorders.

7. Which field focuses on the study of human remains and their context for legal investigations, often involving modern crime scenes?

A. Bioarchaeology

B. Paleopathology

C. Osteology

D. Forensic anthropology

Forensic anthropology focuses on the study of human remains in legal investigations, often at modern crime scenes. It uses bone biology and anthropology to recover and analyze skeletal material, build a biological profile (sex, age, stature, ancestry), identify individuals, and assess trauma or perimortem injuries. It also estimates time since death and other contextual details while working within the legal system—maintaining chain of custody, producing court-ready reports, and sometimes providing expert testimony. This distinguishes it from related fields: bioarchaeology examines ancient populations from archaeological contexts, paleopathology studies diseases in historical populations, and osteology is the study of bones in general without necessarily applying it to current medicolegal cases.

8. 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.

9. Purine base that bonds with cytosine.

A. Adenine

B. Thymine

C. Uracil

D. Guanine

Nucleic acid base pairing occurs between purines and pyrimidines to keep the helix width uniform. Among the purines, adenine and guanine, only guanine pairs with cytosine (which is a pyrimidine). That guanine-cytosine pairing forms three hydrogen bonds, giving GC regions extra stability compared with AT (or AU) pairs. In DNA, adenine pairs with thymine; in RNA, adenine pairs with uracil, while cytosine still pairs with guanine. So the purine that bonds with cytosine is guanine.

10. Molecules that form the basic building blocks of protein; there are 20; 9 are essential (cannot be synthesized by the body) are called what?

A. Polypeptide

B. Genetic code

C. Amino acids

D. Codon

Proteins are made by linking amino acids together; these molecules are the monomers that form the protein polymers. There are 20 standard amino acids used in human proteins, and nine of them are essential because the body cannot synthesize them and must obtain them from the diet. Essential amino acids include histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine. The other terms refer to different ideas: a polypeptide is a long chain of amino acids; the genetic code is the set of rules that translates DNA into protein sequences; and a codon is a three-nucleotide unit in mRNA that specifies a single amino acid. The question is asking for the molecules that are the building blocks themselves, which are amino acids.

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!