

NCEA LEVEL 3 BIOLOGY – HUMAN EVOLUTION (AS91606) PRACTICE EXAM (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. How do anthropologists utilize comparative anatomy in their research?**
 - A. By studying the fossilization processes of ancient species
 - B. By identifying genetic markers unique to modern humans
 - C. Examining anatomical similarities to infer evolutionary relationships
 - D. By evaluating environmental transformations over time
- 2. What is one primary difference between cultural evolution and biological evolution?**
 - A. Cultural evolution is rapid while biological is slow
 - B. Only cultural evolution involves genetic changes
 - C. Biological evolution is always beneficial
 - D. Cultural evolution does not involve any evolutionary changes
- 3. Which Hominin is known for its use of advanced tools and living in social communities?**
 - A. Homo sapiens
 - B. Homo neanderthalensis
 - C. Homo habilis
 - D. Australopithecus afarensis
- 4. Which part of the skull protects the brain?**
 - A. Mandible
 - B. Cranium
 - C. Zygomatic arch
 - D. Maxilla
- 5. What does the 'Out of Africa' theory propose regarding modern human origins?**
 - A. Modern humans evolved independently in different regions
 - B. Modern humans originated in Africa and migrated globally
 - C. Humans have always existed in Europe
 - D. Modern human evolution is a result of genetic engineering

- 6. Why was tool-making important in early human evolution?**
- A. It indicates the development of language
 - B. It demonstrates the ability to hunt large animals
 - C. It shows advanced cognitive functions and adaptability
 - D. It was mainly used for aesthetic purposes
- 7. What influenced the evolutionary changes in early hominins?**
- A. Their ability to create art
 - B. The diverse environments they lived in
 - C. Their dietary preferences only
 - D. Their interactions with other species
- 8. Which area of the brain is primarily associated with speech production?**
- A. Wernicke's area
 - B. Hippocampus
 - C. Broca's area
 - D. Cerebellum
- 9. What does the study of ancient DNA primarily help researchers understand about human evolution?**
- A. Environmental changes
 - B. Genetic relationships and population movements
 - C. Modern human behavior
 - D. Email communication among early humans
- 10. Which of the following best describes the early farmers' lifestyle?**
- A. Relying solely on wild food sources
 - B. Hunting large game
 - C. Cultivating crops
 - D. Constantly migrating

Answers

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

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Explanations

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1. How do anthropologists utilize comparative anatomy in their research?

- A. By studying the fossilization processes of ancient species
- B. By identifying genetic markers unique to modern humans
- C. Examining anatomical similarities to infer evolutionary relationships**
- D. By evaluating environmental transformations over time

Anthropologists utilize comparative anatomy by examining anatomical similarities among different species to infer evolutionary relationships. This approach allows them to analyze structural commonalities and differences, which can indicate a shared ancestry or lineage. For instance, homologous structures—those that arise from a common ancestor but may serve different functions—are particularly informative. By studying these anatomical traits, anthropologists can reconstruct evolutionary pathways, understand the development of specific adaptations, and clarify how various species, including humans, have evolved over time. This method is essential in charting the evolutionary history and relationships of hominins in relation to other primates, ultimately aiding the understanding of human evolution.

2. What is one primary difference between cultural evolution and biological evolution?

- A. Cultural evolution is rapid while biological is slow**
- B. Only cultural evolution involves genetic changes
- C. Biological evolution is always beneficial
- D. Cultural evolution does not involve any evolutionary changes

The primary difference highlighted in the correct choice is that cultural evolution occurs at a much faster pace compared to biological evolution. Cultural evolution refers to the transmission of ideas, behaviors, and customs through social learning, which can happen rapidly in response to environmental or social changes. For instance, new technologies or social norms can spread quickly among human populations. In contrast, biological evolution involves genetic changes that typically occur over long time frames through processes such as natural selection, mutation, and genetic drift. These genetic adaptations can take generations to result in significant changes within a population because they rely on the reproductive success of individuals expressing advantageous traits over many generations. This distinction illustrates that while both forms of evolution result in changes within populations, the mechanisms and timescales differ significantly, with cultural evolution being much more immediate and responsive to shifts in society or environment.

3. Which Hominin is known for its use of advanced tools and living in social communities?

- A. Homo sapiens**
- B. Homo neanderthalensis
- C. Homo habilis
- D. Australopithecus afarensis

Homo sapiens, the species to which all modern human beings belong, is recognized for its advanced tool use and the development of complex social structures. This species is characterized by a high degree of cognitive ability, which enables not only the creation of sophisticated tools but also more intricate social interactions and communication. The use of tools by Homo sapiens includes various types of equipment made from different materials, indicating an ability to adapt to different environments and tasks. This adaptability often extended to cooperative behaviors, allowing early humans to engage in collaborative hunting, gathering, and even child-rearing. These social communities supported the sharing of knowledge and resources, promoting survival and cultural development. In contrast, other hominins such as Homo neanderthalensis, while also exhibiting tool use and social behaviors, did so within a different context and may not have demonstrated the same level of complexity found in Homo sapiens. Species like Homo habilis and Australopithecus afarensis exhibit more primitive tool use and social structures, with Australopithecus particularly known for a more solitary lifestyle. Overall, the distinctive traits of Homo sapiens in tool-making and social organization highlight its evolutionary success and adaptability.

4. Which part of the skull protects the brain?

- A. Mandible
- B. Cranium**
- C. Zygomatic arch
- D. Maxilla

The cranium is the part of the skull that serves the essential function of protecting the brain. It is a robust structure composed of several bones that form a protective enclosure around the brain, effectively safeguarding it from physical impacts and injuries. The cranium ensures that the sensitive neural tissues of the brain are shielded from external forces, thereby playing a critical role in maintaining the overall health and functionality of the central nervous system. In contrast, the mandible, zygomatic arch, and maxilla are all components of the facial skeleton. The mandible, or lower jaw, is involved in chewing and articulating sounds but does not provide protection to the brain. The zygomatic arch, which contributes to the cheekbone structure, and the maxilla, or upper jawbone, also do not serve a protective function for the brain. Instead, they support facial structure and assist in functions such as eating and formation of facial features. Thus, of all the options provided, the cranium stands out as the specific region responsible for safeguarding the brain.

5. What does the 'Out of Africa' theory propose regarding modern human origins?

- A. Modern humans evolved independently in different regions
- B. Modern humans originated in Africa and migrated globally**
- C. Humans have always existed in Europe
- D. Modern human evolution is a result of genetic engineering

The 'Out of Africa' theory proposes that modern humans originated in Africa and then migrated out of the continent to populate other regions of the world. This theory is supported by a wealth of fossil evidence and genetic studies showing that the earliest anatomically modern humans (*Homo sapiens*) emerged in Africa approximately 200,000 to 300,000 years ago. As they migrated, they spread into Euroasia, Australia, and eventually the Americas. The genetic evidence indicates that there is greater genetic diversity within African populations compared to those outside Africa, suggesting that all non-African populations trace their ancestry back to a relatively small group of humans who left Africa. This model contrasts sharply with the idea that modern humans evolved independently in multiple regions, which doesn't account for the shared anatomical and genetic features seen across global human populations. In summary, the theory emphasizes a single, pivotal origin point for modern humans in Africa, followed by subsequent migration and adaptation to various environments around the globe.

6. Why was tool-making important in early human evolution?

- A. It indicates the development of language
- B. It demonstrates the ability to hunt large animals
- C. It shows advanced cognitive functions and adaptability**
- D. It was mainly used for aesthetic purposes

Tool-making was crucial in early human evolution as it reflects advanced cognitive functions and a high degree of adaptability among early humans. The creation and use of tools required not only the ability to manipulate materials but also planning, foresight, and problem-solving skills. The process of selecting appropriate materials, designing a tool for a specific purpose, and improving techniques over time demonstrates an evolutionary leap in brain development and social structure among early human species. Additionally, tool-making allowed early humans to exploit their environment more effectively, improving their chances of survival. They could gather food, cut meat, and process plants in ways that would have been impossible without tools. This adaptability to various environments and challenges contributed significantly to their success, enabling them to thrive in diverse habitats. In contrast, while language development and hunting large animals may be related to cognitive advances, they are not direct outcomes of tool-making itself. Furthermore, the notion that tool-making was primarily for aesthetic purposes does not align with its primary role in enhancing survival and adaptation. Thus, recognizing the link between tool-making and cognitive function is essential in understanding human evolutionary progress.

7. What influenced the evolutionary changes in early hominins?

- A. Their ability to create art
- B. The diverse environments they lived in**
- C. Their dietary preferences only
- D. Their interactions with other species

The evolutionary changes in early hominins were significantly influenced by the diverse environments they inhabited. As early human ancestors moved into varied habitats, such as open savannas, forests, and wetlands, they faced different challenges and opportunities that shaped their adaptations. For instance, environmental factors like climate, availability of resources, and competition with other species played critical roles in driving changes in behavior, physiology, and morphology among early hominins. The ability to adapt to a range of environmental conditions also informed their development of bipedalism, tool use, and social behaviors, which were essential for survival and reproduction. By responding to the pressures and opportunities of their diverse environments, early hominins were able to thrive in different contexts, ultimately leading to significant evolutionary transformations that would lay the groundwork for modern humans.

8. Which area of the brain is primarily associated with speech production?

- A. Wernicke's area
- B. Hippocampus
- C. Broca's area**
- D. Cerebellum

Broca's area is primarily associated with speech production and is located in the frontal lobe of the brain. This area plays a crucial role in the formation of speech and the ability to articulate thoughts verbally. When Broca's area is activated, it enables an individual to construct grammatically correct sentences and express ideas coherently. This area is vital for producing language as it interacts with various other regions in the brain to coordinate the complex actions involved in speech, such as controlling the movement of the mouth, lips, and vocal cords. Damage to Broca's area can result in Broca's aphasia, a condition characterized by difficulty in speech production while often preserving comprehension, highlighting its specific role in language output. In contrast, Wernicke's area, though related to language, primarily deals with language comprehension rather than production. The hippocampus is primarily involved in memory formation and spatial navigation, while the cerebellum is associated with coordinating movement and balance, neither of which are directly involved in the production of speech.

9. What does the study of ancient DNA primarily help researchers understand about human evolution?

- A. Environmental changes
- B. Genetic relationships and population movements**
- C. Modern human behavior
- D. Email communication among early humans

The study of ancient DNA is pivotal in understanding genetic relationships and population movements because it provides direct evidence of the genetic makeup of early humans and their ancestors. Analyzing ancient DNA allows researchers to trace lineage and ancestry, revealing how different populations are related to one another. This can shed light on how human groups migrated across the globe, interbred with other hominins, and adapted to various environments throughout history. By working with ancient genetic material, scientists can reconstruct a timeline of human evolution, better understand the origins of specific traits, and illuminate the evolutionary pathways that led to the modern human populations we see today. The information gleaned from ancient DNA can show how populations have changed over time in response to environmental pressures or social factors, painting a comprehensive picture of our evolutionary journey. While environmental changes and modern human behavior are certainly important in studying evolution, and although communication may play a role in social structures, they do not directly relate to the genetic aspect that ancient DNA elucidates. Therefore, the primary focus of ancient DNA studies is the genetic relationships and movements of populations throughout human evolution.

10. Which of the following best describes the early farmers' lifestyle?

- A. Relying solely on wild food sources
- B. Hunting large game
- C. Cultivating crops**
- D. Constantly migrating

Early farmers are best described by the lifestyle characterized by cultivating crops. This shift towards agriculture marked a significant transition in human history from nomadic hunter-gatherer societies to more settled ways of living. The development of farming techniques allowed early humans to domesticate plants and animals, which led to more stable food supplies and the ability to establish permanent settlements. This transition to agriculture precipitated various social changes, including the development of complex societies, trade networks, and advancements in technology. By cultivating crops, early farmers could sustain larger populations and create surplus food, which in turn supported the development of towns and cities. The other choices reflect different aspects of human behavior prior to this agricultural revolution. Reliance on wild food sources indicates a hunter-gatherer lifestyle, which contrasts with the settled nature of farming. Hunting large game was a facet of this earlier lifestyle and does not encompass the broader practice and benefits of agriculture. Finally, constantly migrating aligns with a nomadic existence that is less compatible with the permanence associated with agricultural societies. Thus, cultivating crops effectively captures the essence of the early farmers' lifestyle.

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://ncealvl3bioas91606.examzify.com>

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

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