ACADEMIC DECATHLON SCIENCE PRACTICE TEST (SAMPLE)

STUDY GUIDE

Prepare with structure. Pass with confidence

Table of Contents

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. What is a burrow used for?

A. Feeding

B. Sleep during the day

C. Shelter or nesting

D. Digging for minerals

2. Which description accurately defines roundworms?

A. They have segmented bodies.

B. They are unsegmented worms with cylindrical bodies.

C. They have a shell around their bodies.

D. They are primarily aquatic and have gills.

3. Which statement about owls' eyes is supported by the text?

A. Owls have large eyes that help them see well in low light.

B. Owls have large eyes that help them see well in daylight.

C. Owls have small eyes.

D. Owls have no eyes.

4. Which feature do chameleons use to catch prey at a distance?

A. A tail that curls to trap prey

B. A long sticky tongue for catching prey.

C. Sharp teeth to shred prey

D. Wings to catch prey.

5. How long is the smallest lizard found in the Caribbean?

A. About 2 inches.

B. About 6 inches.

C. About 12 inches.

D. About 3 inches.

6. Which characteristic is typical of crustaceans?

A. They are vertebrates with backbones.

B. They lack a protective covering.

C. They have a hard exoskeleton.

D. They live exclusively on land.

7. Which statement is true about insect eyes?

A. All insects have color vision identical to humans.

B. Compound eyes are composed of a single lens.

C. Ocelli are capable of high-resolution vision.

D. Compound eyes are made up of many visual units called ommatidia that provide a wide field of view.

8. What is plankton?

A. Small organisms that drift in water and are a crucial food source for many aquatic animals.

B. Large nektonic predators that actively swim.

C. Benthic organisms living on the seafloor.

D. Floating debris that accumulates in currents.

9. Which adaptations help bald eagles fish?

A. Sharp talons, keen eyesight, and strong wings.

B. Long, slender beaks.

C. Camouflage plumage.

D. Herbivorous beak.

10. Which bird is described as a scavenger with a varied diet including carrion?

A. Marabou stork

B. Snow goose

C. Shoebill

D. Pied kingfisher

Answers

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

Explanations

1. What is a burrow used for?

A. Feeding

B. Sleep during the day

C. Shelter or nesting

D. Digging for minerals

A burrow is an underground home that an animal digs to protect itself and its offspring. The main use is shelter or nesting: it provides a safe, sheltered space to rest, stay warm or cool, and raise young away from predators. While some animals may stash or access food near a burrow, its purpose as a living space is what makes it most important. Digging for minerals isn't a typical function of a burrow, whereas shelter and nesting are precisely what these underground homes are built for.

2. Which description accurately defines roundworms?

A. They have segmented bodies.

B. They are unsegmented worms with cylindrical bodies.

C. They have a shell around their bodies.

D. They are primarily aquatic and have gills.

Roundworms are unsegmented, elongated worms with a cylindrical shape. They lack true body segments and are covered by a tough, flexible cuticle that they moult as they grow, rather than having any shell around them. The exterior is not a shell, but a cuticle, and many roundworms live in environments where respiration happens across their body surface rather than through gills. So the description that best fits them is unsegmented, cylindrical worms. The other ideas describe segmented bodies, a shell, or gill-based respiration, which don't define nematodes.

3. Which statement about owls' eyes is supported by the text?

A. Owls have large eyes that help them see well in low light.

B. Owls have large eyes that help them see well in daylight.

C. Owls have small eyes.

D. Owls have no eyes.

The main idea here is how eye size relates to vision in low light. Owls have notably large eyes, which means a larger light-gathering area. In dim conditions, collecting more light is crucial for forming a usable image, so their big eyes support good night vision. That's why the statement that owls have large eyes that help them see well in low light fits the text best. The other possibilities don't align with this focus: suggesting their eyes are best in daylight isn't what the text emphasizes, and claims that owls have small or no eyes contradict both the text and what we know about owl anatomy.

4. Which feature do chameleons use to catch prey at a distance?

A. A tail that curls to trap prey

B. A long sticky tongue for catching prey.

C. Sharp teeth to shred prey

D. Wings to catch prey.

The key idea is an adaptation that lets the chameleon strike prey from a distance. Its long tongue can shoot out rapidly and adhere to prey with sticky saliva. The tongue is powered by strong muscles and a specialized bone system that stores and releases energy like a spring, propelling the tongue far beyond what the mouth could reach. Once the prey sticks to the tongue, it's pulled back into the mouth for consumption. This setup lets the chameleon catch insects quickly on branches without chasing them down. Other features listed aren't used for long-distance capture: a curling tail helps with balance and grip on perches, not catching prey, sharp teeth are for chewing after capture, and wings aren't a feature of chameleons.

5. How long is the smallest lizard found in the Caribbean?

A. About 2 inches.

B. About 6 inches.

C. About 12 inches.

D. About 3 inches.

Size can vary a lot among lizards, and the Caribbean has some especially tiny species. The smallest Caribbean lizards are only about two inches long, so that estimate best fits the tiny end of the range. Four inches or less would be much bigger than the smallest species, while six or twelve inches are clearly much larger than what you'd expect for the tiniest Caribbean lizards. In field descriptions, lengths are often given as snout-to-vent, but for a quick sense of scale, about two inches is a solid approximation for the smallest Caribbean lizards.

6. Which characteristic is typical of crustaceans?

A. They are vertebrates with backbones.

B. They lack a protective covering.

C. They have a hard exoskeleton.

D. They live exclusively on land.

Crustaceans are characterized by having a hard exoskeleton. This external shell, made of chitin and often mineralized, protects the animal and provides surfaces for muscle attachment. Because the shell is rigid, crustaceans must molt it as they grow. They are invertebrates, not vertebrates, so they don't have backbones. The exoskeleton also helps minimize water loss in their often aquatic environments. While some crustaceans spend time on land, many live in water, so living exclusively on land isn't typical for the group.

7. Which statement is true about insect eyes?

A. All insects have color vision identical to humans.

B. Compound eyes are composed of a single lens.

C. Ocelli are capable of high-resolution vision.

D. Compound eyes are made up of many visual units called ommatidia that provide a wide field of view.

Insects rely on a compound eye built from many tiny units called ommatidia. Each ommatidium has its own lens and light-detecting cells, sampling a small portion of the world. When many of these units are arranged around the head, they collectively cover a wide area, giving a broad field of view and excellent motion detection. Because the image is formed by combining many separate samples, it isn't as sharp as what you get from a single, large lens, but the trade-off is a nearly panoramic view and sensitivity to movement. Insects don't see exactly like humans. Color vision varies and often includes wavelengths we don't see, such as UV. Ocelli are simple eyes that detect light intensity rather than providing high-resolution vision. And a compound eye isn't one lens; it's a cluster of many lenses, each contributing part of the overall image.

8. What is plankton?

A. Small organisms that drift in water and are a crucial food source for many aquatic animals.

B. Large nektonic predators that actively swim.

C. Benthic organisms living on the seafloor.

D. Floating debris that accumulates in currents.

Plankton are organisms that drift with water movement rather than actively swimming. They're typically small and include two main groups: phytoplankton, the microscopic plants that photosynthesize, and zooplankton, tiny animals that feed on other organisms or organic particles. Because they float with currents and become concentrated in productive areas, they form the base of many aquatic food webs, serving as the crucial food source for a wide range of larger animals, from small fish to whales. This distinguishes them from nekton, which are active swimmers like larger fish and squid; from benthos, which live on or near the seafloor; and from floating debris, which is nonliving material.

9. Which adaptations help bald eagles fish?

A. Sharp talons, keen eyesight, and strong wings.

B. Long, slender beaks.

C. Camouflage plumage.

D. Herbivorous beak.

Adaptations that help bald eagles fish rely on three abilities: grabbing, vision, and powerful flight. Sharp talons act like grippers, letting the eagle seize and hold onto slippery fish even when the water sprinkles or the prey struggles. Keen eyesight lets the eagle spot fish from high above the surface and judge the timing for a precise strike. Strong wings provide the speed and lift needed to dive quickly and haul sizeable fish out of the water. The other ideas don't fit as well: a long slender beak isn't as effective for grasping and tearing fish, camouflage plumage is more about concealment than catching prey in open water, and a herbivorous beak is suited for plant foods, not fish.

10. Which bird is described as a scavenger with a varied diet including carrion?

A. Marabou stork

B. Snow goose

C. Shoebill

D. Pied kingfisher

Scavenging is feeding on dead or decaying animals, a strategy that lets some birds exploit carrion as a reliable food source. The marabou stork fits this role perfectly: it is famous for an opportunistic, varied diet that includes carrion, fish, frogs, insects, small mammals, and other refuse. Its physical adaptations—a large bill and a bare head—are well-suited for feeding at carcasses, and it often loiters at carcass sites or dumps to take advantage of available leftovers. The other birds listed don't rely on carrion: snow geese mostly graze on plants, the shoebill hunts fish and amphibians, and the pied kingfisher specializes in catching fish by diving. So the marabou stork is the best match for a scavenger with a varied diet including carrion.

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://academicdecathlonscience.examzify.com

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