ORNITHOLOGY EXAM II – ANATOMY & PHYSIOLOGY PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://ornithology2anatomyphysio.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 combination statement is true about avian genome size and red blood cells?

A. Genome around 1 gigabase and red blood cells are nucleated.

B. Genome around 3 gigabases and red blood cells are nucleated.

C. Genome around 1 gigabase and red blood cells are enucleated.

D. Genome around 2 gigabases and red blood cells are nucleated.

2. The pygostyle is best described as which of the following?

A. A fused tail vertebra forming part of the pelvis.

B. A single vertebra at the neck.

C. A wing bone.

D. The fused caudal vertebrae that support tail feathers used for steering and braking.

3. What is the function of the uropygial (preen) gland, and what is its secretion used for?

A. It secretes oils used to preen feathers, aiding waterproofing and feather integrity.

B. It secretes enzymes for digestion

C. It secretes pheromones to attract mates

D. It filters blood for feather growth

4. Which group has three cone types rather than four?

A. Mammals

B. Birds

C. Reptiles

D. Fish

5. In birds, which region is involved in water absorption and waste elimination?

A. Cloaca initiates digestion in birds.

B. Cloaca participates in water absorption and waste elimination.

C. Cloaca is the primary site of gas exchange.

D. Cloaca secretes digestive enzymes.

SAMPLE

6. Torpor is characterized by a decrease in metabolism; which of the following is true?

A. True — body temperature drops toward ambient temperature

B. False — metabolism increases

C. Not applicable

D. Only occurs during feeding

7. How many chambers does the avian heart have?

A. 4

B. 3

C. 2

D. 5

8. How does the avian kidney contribute to osmoregulation in desert or arid environments?

A. It lacks any salt excretion mechanisms and accumulates salts.

B. It efficiently reabsorbs water and excretes uric acid; some desert birds rely on salt glands to excrete salts.

C. It excretes large volumes of dilute urine to remove salts.

D. It uses specialized glands in the beak to excrete salts.

9. Which liver functions are particularly important in birds?

A. Detoxification and immune defense.

B. Detoxification and lipid metabolism.

C. Lipid storage only.

D. Immune response and pigment synthesis.

10. Bird bodies are _____ than mammals.

A. Colder

B. Warmer

C. Hotter

D. Same temperature

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Which combination statement is true about avian genome size and red blood cells?

A. Genome around 1 gigabase and red blood cells are nucleated.

B. Genome around 3 gigabases and red blood cells are nucleated.

C. Genome around 1 gigabase and red blood cells are enucleated.

D. Genome around 2 gigabases and red blood cells are nucleated.

Bird genomes are compact, typically around 1 gigabase in size, and unlike mammals, mature red blood cells in birds retain their nucleus. This combination—about 1 Gb genome and nucleated erythrocytes—is the true pairing for avians. In contrast, a genome around 3 gigabases or 2 gigabases would be unusually large for birds, and red blood cells enucleated would contradict the known avian condition where RBCs keep their nucleus.

2. The pygostyle is best described as which of the following?

A. A fused tail vertebra forming part of the pelvis.

B. A single vertebra at the neck.

C. A wing bone.

D. The fused caudal vertebrae that support tail feathers used for steering and braking.

The tail end of a bird is built from the last few caudal vertebrae fused into a single structure—the pygostyle. This fusion creates a sturdy peg that anchors the tail feathers (the rectrices), which act as a rudder and brake during flight to help with steering and stabilization. So the pygostyle is the fused tail vertebrae that support tail feathers used for steering and braking. It isn't part of the pelvis (that region forms the synsacrum), nor is it a neck vertebra, nor a wing bone.

3. What is the function of the uropygial (preen) gland, and what is its secretion used for?

A. It secretes oils used to preen feathers, aiding waterproofing and feather integrity.

B. It secretes enzymes for digestion

C. It secretes pheromones to attract mates

D. It filters blood for feather growth

The main idea is that this gland's job is to keep the bird's plumage in top condition. The uropygial gland sits at the base of the tail and produces an oily secretion rich in waxes and fatty esters. During preening, the bird rubs this oil onto its feathers, coating the shafts and barbules. That oily layer helps maintain waterproofing and feather integrity by keeping the feathers flexible, preventing brittleness, and filling small gaps between feather structures. The coating also supports insulation and flight efficiency, and it can contribute to keeping the plumage cleaner and less prone to microbial growth. This gland isn't involved in digestion, pheromone production for mating, or blood filtration, which is why the oil's role is specifically about maintaining and protecting the plumage.

SAMPLE

4. Which group has three cone types rather than four?

A. Mammals

B. Birds

C. Reptiles

D. Fish

Color vision depends on the number and types of cone photoreceptors in the retina, each tuned to different parts of the light spectrum. Birds have four distinct cone types, including a sensitivity to ultraviolet, which gives them tetrachromatic vision with four separate color channels. In contrast, mammals typically have three cone types corresponding to short, middle, and long wavelengths, providing trichromatic vision. Some mammals can be dichromats, but the common pattern across many species is three cone types rather than four. Reptiles and fish more often have four or more cone types, giving them additional color channels beyond three. So, mammals are the group that typically has three cone types instead of four.

5. In birds, which region is involved in water absorption and waste elimination?

A. Cloaca initiates digestion in birds.

B. Cloaca participates in water absorption and waste elimination.

C. Cloaca is the primary site of gas exchange.

D. Cloaca secretes digestive enzymes.

Water absorption and waste elimination in birds are handled by the cloaca, a common posterior chamber where the digestive and urinary tracts converge. It reabsorbs water from waste as it passes through, helping form concentrated, semi-solid urate-rich waste that is eventually excreted. This region also serves as the exit for both feces and urine. For context, gas exchange occurs in the lungs and air sacs, not in the cloaca, and digestive enzymes are secreted by the stomach glands and pancreas, not by this region.

6. Torpor is characterized by a decrease in metabolism; which of the following is true?

A. True — body temperature drops toward ambient temperature

B. False — metabolism increases

C. Not applicable

D. Only occurs during feeding

Torpor is a short-term, energy-saving state in which metabolic rate drops markedly. Because heat production falls with the reduced metabolism, the animal's body temperature can fall toward the surrounding environment. That is why the true statement is that body temperature drops toward ambient temperature. The idea that metabolism increases is inconsistent with torpor, and torpor is not restricted to feeding periods or inapplicable—it's a response to energy scarcity or cold, helping the animal conserve energy.

SAMPLE

7. How many chambers does the avian heart have?

A. 4

B. 3

C. 2

D. 5

Birds have a four-chambered heart, with two atria and two ventricles, separated by a complete ventricular septum. This arrangement creates two distinct circulatory routes: a pulmonary circuit that carries deoxygenated blood from the body to the lungs, and a systemic circuit that sends oxygenated blood from the lungs to the rest of the body. Blood returning from the body enters the right atrium, passes to the right ventricle, and is pumped to the lungs for oxygenation. Oxygenated blood returns to the left atrium, moves into the left ventricle, and is distributed to the body. The complete separation of these circuits prevents mixing of blood, supporting the high metabolic demands of flight and endothermy. Having fewer chambers would allow some mixing and reduce efficiency, while more chambers isn't a standard avian configuration.

8. How does the avian kidney contribute to osmoregulation in desert or arid environments?

A. It lacks any salt excretion mechanisms and accumulates salts.

B. It efficiently reabsorbs water and excretes uric acid; some desert birds rely on salt glands to excrete salts.

C. It excretes large volumes of dilute urine to remove salts.

D. It uses specialized glands in the beak to excrete salts.

In desert environments, birds must keep their body water while still getting rid of waste and excess salts. The avian kidney helps with this by reabsorbing as much water as possible from the filtrate and by excreting waste as uric acid, which uses little water to eliminate. This combination lets the bird stay hydrated while still removing nitrogenous waste. In many desert species, salt glands near the eyes actively excrete excess salts, providing an additional route to regulate osmotic balance. Together, water reabsorption with uric acid production and salt gland excretion keep osmoregulation efficient in arid conditions.

9. Which liver functions are particularly important in birds?

A. Detoxification and immune defense.

B. Detoxification and lipid metabolism.

C. Lipid storage only.

D. Immune response and pigment synthesis.

Detoxification and lipid metabolism are especially important in birds because the liver sits at the crossroads of handling toxins and supplying the large lipid flux required by flight and reproduction. The avian liver houses detox enzymes that process xenobiotics and metabolic waste, helping to neutralize substances the body encounters. It also plays a central role in lipid handling: it synthesizes and packages lipids into lipoproteins used for transport in the blood, and it produces yolk precursors (like vitellogenin and related lipoproteins) that are essential for egg formation. This combination—clearing harmful compounds and providing the lipids needed for energy, sustained flight, and reproduction—highlights why detoxification and lipid metabolism are the standout liver functions in birds. Lipid storage is not the primary emphasis of avian hepatic work, and immune or pigment synthesis are handled by other systems or tissues.

SAMPLE

10. Bird bodies are _____ than mammals.

A. Colder

B. Warmer

C. Hotter

D. Same temperature

Birds keep a higher core body temperature than most mammals. This elevated temperature, typically around 40 to 42°C, matches the intense metabolic rate required for flight and rapid digestion and activity. Feathers provide excellent insulation to retain that heat, while the birds' respiratory and cardiovascular systems support efficient heat production and distribution. Because mammals usually run closer to about 37°C, describing bird bodies as hotter best reflects this general physiological pattern.

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://ornithology2anatomyphysio.examzify.com

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

SAMPLE