

MSK INDIVIDUAL READINESS ASSURANCE TEST (IRAT) PRACTICE TEST (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. In HYPP, CK and AST levels would be within the reference range.**
 - A. Elevated above reference.
 - B. Within reference interval.
 - C. Decreased below reference.
 - D. Highly variable.

- 2. By what age do OCD lesions in horses typically develop or are diagnosed?**
 - A. 2 months
 - B. 7 months
 - C. 5 months
 - D. 9 months

- 3. Which statement about the relationship between flap lesions and subchondral bone cysts in OCD is correct?**
 - A. Flaps occur in high shear regions.
 - B. Cysts form in areas of maximal shear loads.
 - C. Flaps occur in regions of high compressive loads.
 - D. Flaps occur in regions of high shear forces, while subchondral bone cysts occur in areas subjected to maximal compressive loads.

- 4. 2-year-old NM Rottweiler presents with primary complaint of inability to open jaw. What is next best diagnostic test?**
 - A. Serum anti-2M antibody titer
 - B. Radiographs of skull
 - C. Complete blood count
 - D. Serum calcium

- 5. A mutation in the SCN4A gene leading to HYPP affects which voltage-gated ion channel?**
 - A. Sodium channel
 - B. Potassium channel
 - C. Calcium channel
 - D. Chloride channel

- 6. What does synovial fluid cytology show in cases of IMPA?**
- A. Decreased nucleated cell count with degenerative neutrophils
 - B. Increased total nucleated cell count, increase in non-degenerate neutrophils
 - C. Increased eosinophils
 - D. Predominantly lymphocytes
- 7. What is the major concern with pigs infected with *Trichinella solium*?**
- A. Rapid death
 - B. Neurological signs
 - C. Zoonotic risk
 - D. No risk to humans
- 8. Osteosarcoma accounts for what percentage of canine primary bone tumors?**
- A. 25-40%
 - B. 50%
 - C. 10-20%
 - D. 75-90%
- 9. Which gait change is consistent with hip dysplasia?**
- A. Bunny hop
 - B. Waddling gait
 - C. Plantigrade stance
 - D. Circling behavior
- 10. Horses that have ingested ionophores show which necropsy finding?**
- A. Skeletal muscle necrosis
 - B. Myocardial chamber dilation
 - C. Liver necrosis
 - D. Myocardial necrosis

Answers

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

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Explanations

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1. In HYPP, CK and AST levels would be within the reference range.

- A. Elevated above reference.
- B. Within reference interval.**
- C. Decreased below reference.
- D. Highly variable.

CK and AST are enzymes that indicate muscle injury when they rise in the blood. HYPP causes episodic weakness but does not usually cause continuous muscle damage. Between episodes, there isn't ongoing muscle injury, so CK and AST typically stay within their normal reference ranges. You'd only expect elevations if a horse is having an acute attack or after strenuous exertion that causes muscle breakdown. So, the statement that they would be within the reference range fits the usual pattern, whereas elevations would be expected only during an attack, not as a constant finding. Decreased levels are not typical, and values aren't inherently highly variable unless an episode or exertional rhabdomyolysis is occurring.

2. By what age do OCD lesions in horses typically develop or are diagnosed?

- A. 2 months
- B. 7 months**
- C. 5 months
- D. 9 months

OCD lesions arise when rapid skeletal growth disrupts normal endochondral ossification, leading to cartilage flaps or loose bone pieces in the joint. In foals and young horses, this process is most active during the first year of life, and many lesions become detectable around the middle of that period. Seven months sits squarely in this active growth window, making changes radiographically apparent as the articular cartilage thickens and the subchondral bone begins to show irregularities. That's why seven months is the most commonly cited time for development or diagnosis. The earlier ages are usually too young for reliable detection, while nine months is less typical, though not impossible.

3. Which statement about the relationship between flap lesions and subchondral bone cysts in OCD is correct?

- A. Flaps occur in high shear regions.
- B. Cysts form in areas of maximal shear loads.
- C. Flaps occur in regions of high compressive loads.
- D. Flaps occur in regions of high shear forces, while subchondral bone cysts occur in areas subjected to maximal compressive loads.**

In OCD, different parts of the joint are subjected to different kinds of mechanical stress, and this shapes how lesions develop. Flap lesions form where shear forces across the cartilage-subchondral interface are high, causing cartilage to fissure and eventually detach as a loose piece. Subchondral bone cysts arise under areas of maximal compressive loading, where repeated compression leads to microfractures in the subchondral bone and intrusion of fluid, forming a cyst beneath the cartilage. So the best statement reflects both patterns: flaps in high shear regions, and cysts in areas subjected to maximal compressive loads. The other ideas don't fit because they tie flaps or cysts to the opposite loading conditions.

4. 2-year-old NM Rottweiler presents with primary complaint of inability to open jaw. What is next best diagnostic test?

- A. Serum anti-2M antibody titer
- B. Radiographs of skull**
- C. Complete blood count
- D. Serum calcium

When a dog cannot open its mouth, the first priority is to look for mechanical problems in the jaw and skull that would physically prevent opening. Imaging the skull with radiographs lets you visualize the mandible, temporomandibular joints, maxilla, and teeth to detect fractures, dislocations, severe dental disease, or osteomyelitis. These findings are common and treatable causes of trismus, and they guide the next steps in management. If the skull radiographs show no structural issue, you then investigate non-mechanical causes such as inflammatory or autoimmune muscle diseases, which would be pursued with specific tests like antibody titers. So skull radiographs are the best next test because they directly assess the most likely surgical or traumatic causes and quickly direct subsequent diagnostic decisions.

5. A mutation in the SCN4A gene leading to HYPP affects which voltage-gated ion channel?

- A. Sodium channel**
- B. Potassium channel
- C. Calcium channel
- D. Chloride channel

HYPP from SCN4A mutations alters the skeletal muscle voltage-gated sodium channel (Nav1.4). The SCN4A gene encodes the alpha subunit that gates sodium influx necessary for action potential initiation. Mutations often cause a gain-of-function effect—abnormal persistent sodium current or delayed inactivation—leading to abnormal depolarization of muscle fibers. When serum potassium rises, the depolarized state reduces excitability and produces episodic weakness or paralysis. Since SCN4A encodes a sodium channel, the primary channel affected is the sodium channel; potassium, calcium, and chloride channels are not the direct targets of this mutation.

6. What does synovial fluid cytology show in cases of IMPA?

- A. Decreased nucleated cell count with degenerative neutrophils
- B. Increased total nucleated cell count, increase in non-degenerate neutrophils**
- C. Increased eosinophils
- D. Predominantly lymphocytes

In immune-mediated polyarthritis, the joint becomes inflamed due to immune processes, leading to a neutrophil-predominant but sterile effusion. The key cytology feature is an elevated total nucleated cell count with neutrophils that are nondegenerate (normal-appearing neutrophils without toxic changes). This pattern differentiates IMPA from septic arthritis, where neutrophils are typically degenerate and bacteria may be seen. Eosinophils or predominantly lymphocytes are not the characteristic finding for IMPA. So, the best description is an increased cell count with nondegenerate neutrophils.

7. What is the major concern with pigs infected with *Trichinella solium*?

- A. Rapid death
- B. Neurological signs
- C. Zoonotic risk**
- D. No risk to humans

Pigs infected with Trichinella raise a clear public health concern because the parasite can be transmitted to humans who eat undercooked pork. The larvae encyst in pig muscle, and when people consume meat containing these cysts, the larvae are released and establish infection in the human host, causing trichinellosis. The animals themselves often show few or no signs, so the risk to humans becomes the decisive issue for food safety and surveillance. That's why the zoonotic risk is the best answer: it directly addresses why infection in pigs matters in real-world terms. Rapid death or neurological signs are not typical concerns in pigs, and saying there's no risk to humans contradicts the known transmission pathway of Trichinella.

8. Osteosarcoma accounts for what percentage of canine primary bone tumors?

- A. 25-40%
- B. 50%
- C. 10-20%
- D. 75-90%**

Osteosarcoma is the most common primary bone tumor in dogs, making up the vast majority of these tumors. In clinical canine oncology, roughly three-quarters to nine-tenths of primary bone tumors are osteosarcomas, with many sources citing about 85%. That's why the best choice is the 75-90% range—it reflects that OS overwhelmingly dominates the landscape of canine primary bone tumors. The other percentages would imply OS is only a minority or a significant minority, which doesn't align with how frequently it occurs compared with other primary bone tumor types.

9. Which gait change is consistent with hip dysplasia?

- A. Bunny hop**
- B. Waddling gait
- C. Plantigrade stance
- D. Circling behavior

Hip dysplasia creates pain and instability in the hind hips, so animals instinctively adopt a gait that minimizes hip strain. The resulting pattern is a bunny hop: the hind legs move together in a short, synchronized kick rather than alternating normally, and the body may momentarily lift as the weight shifts forward. This two-beat, compact motion helps lessen painful hip extension and joint loading during movement. Other gaits don't fit this pattern as well. A waddling gait is more about broad-based weakness or pelvic instability from various causes, a plantigrade stance reflects different foot placement issues, and circling behavior points toward neurological or vestibular problems.

10. Horses that have ingested ionophores show which necropsy finding?

- A. Skeletal muscle necrosis
- B. Myocardial chamber dilation
- C. Liver necrosis
- D. Myocardial necrosis**

Ionophores are highly cardiotoxic in horses, so the hallmark lesion seen at necropsy is death of heart muscle. These compounds disrupt ion transport across cell membranes, leading to calcium overload and mitochondrial dysfunction that drive cardiac myocyte necrosis. The heart's high energy demands make it especially susceptible, so myocardial necrosis stands out as the most consistent finding. Skeletal muscle necrosis can occur with ionophore exposure, but it's less specific and not the primary lesion described. Liver necrosis is not typically a primary feature, and chamber dilation reflects a functional consequence rather than the initial tissue injury. Therefore, myocardial necrosis best matches ionophore ingestion in horses.

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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://mskirat.examzify.com>

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

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