

SPINAL ANATOMY EXAM III PRACTICE (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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

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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. Ferguson's angle is associated with which region of the spine?**
 - A. Cervical
 - B. Thoracic
 - C. Lumbar
 - D. Sacral
- 2. Which muscle is considered an intrinsic back muscle?**
 - A. Latissimus dorsi
 - B. Rotatores
 - C. Serratus posterior inferior
 - D. Levator scapulae
- 3. The accessory process of a lumbar vertebra is located on which structure?**
 - A. On the spinous process
 - B. On the transverse processes
 - C. On the lamina
 - D. On the pedicles
- 4. Which ribs are considered true ribs?**
 - A. Ribs 1-7
 - B. Ribs 2-6
 - C. Ribs 8-12
 - D. Ribs 1-5
- 5. Which part of the vertebral artery is encountered on the posterior arch of the atlas in the suboccipital triangle? (Alternate phrasing)**
 - A. First part
 - B. Second part
 - C. Third part
 - D. Fourth part
- 6. How are intervertebral joints classified?**
 - A. Synovial
 - B. Symphysis
 - C. Syndesmosis
 - D. Gomphosis

- 7. Ponticulus posticus is an anomaly associated with which vertebra?
(Alternate phrasing)**
- A. C1
 - B. C2
 - C. C5
 - D. C7
- 8. Which shape best describes the lumbar vertebral foramen?**
- A. Circular
 - B. Oval
 - C. Triangular
 - D. Rectangular
- 9. Intervertebral joints are classified as which type?**
- A. Symphysis
 - B. Synovial
 - C. Gomphosis
 - D. Syndesmosis
- 10. Which joint is located at the junction between the last lumbar vertebra and the first sacral segment?**
- A. L4-L5 facet joint
 - B. L5-S1 facet joint
 - C. Sacroiliac joint
 - D. Intervertebral disc between L5 and S1

Answers

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

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Explanations

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1. Ferguson's angle is associated with which region of the spine?

- A. Cervical
- B. Thoracic
- C. Lumbar**
- D. Sacral

Ferguson's angle, often called the lumbosacral angle, describes the tilt at the junction where the lumbar spine meets the sacrum. It's measured as the angle between a line along the superior endplate of the lowest lumbar vertebra (typically L5) and a horizontal reference, or variations of the same idea using the sacral base. This angle captures how much the lumbar spine curves forward (lumbar lordosis) and how the sacrum sits relative to the pelvis. Because the measurement centers on the orientation and curvature of the lumbar region as it transitions into the sacrum, it is a feature of the lumbar area. A larger angle reflects greater lumbar lordosis, linking it to the lumbar spine rather than the cervical, thoracic, or sacral regions alone.

2. Which muscle is considered an intrinsic back muscle?

- A. Latissimus dorsi
- B. Rotatores**
- C. Serratus posterior inferior
- D. Levator scapulae

Intrinsic back muscles are the deep group that originate on the spine and act primarily on the vertebral column to stabilize and move the spine. Rotatores fit this description perfectly: they are tiny, short muscles of the transversospinales that extend from a transverse process to the spinous process of a nearby vertebra above. Their main roles are stabilizing the spinal segments and assisting in rotation and slight extension of the spine. This places them squarely among the intrinsic back muscles. The other options work on the shoulder girdle or rib cage rather than the spine itself, so they're considered extrinsic back muscles. Latissimus dorsi, for example, originates from the pelvis and lower spine and attaches to the humerus to move the arm. Levator scapulae and serratus posterior inferior mainly act on the scapula or ribs rather than the vertebral column.

3. The accessory process of a lumbar vertebra is located on which structure?

- A. On the spinous process
- B. On the transverse processes**
- C. On the lamina
- D. On the pedicles

In lumbar vertebrae the accessory process is a small projection located on the posterior base of the transverse process. This position makes it a site for muscle and ligament attachments near where the transverse process begins, distinguishing it from the spinous process, lamina, or pedicles. Therefore, the accessory process is found on the transverse processes.

4. Which ribs are considered true ribs?

- A. Ribs 1-7
- B. Ribs 2-6**
- C. Ribs 8-12
- D. Ribs 1-5

Direct attachment to the sternum defines true ribs. The first seven pairs connect to the sternum through their own costal cartilages, giving them a direct, independent link to the chest wall. The remaining ribs do not attach directly: ribs 8 through 10 connect to the cartilage of the rib above (indirect attachment to the sternum), and ribs 11 and 12 do not attach to the sternum at all (floating). So, the true ribs are the top seven pairs, which is why that option is correct.

5. Which part of the vertebral artery is encountered on the posterior arch of the atlas in the suboccipital triangle? (Alternate phrasing)

- A. First part
- B. Second part
- C. Third part**
- D. Fourth part

The vertebral artery is classically divided into four segments along its journey from the subclavian to the brainstem. After it ascends through the transverse foramen of the atlas (C1), it courses medially over the posterior arch of the atlas in a groove and then enters the foramen magnum. This portion—the segment between leaving the C1 transverse foramen and entering the skull—is the third part. It's the part you encounter on the posterior arch of the atlas within the suboccipital triangle, where the artery lies in a groove on the posterior arch before turning medially to enter the foramen magnum.

6. How are intervertebral joints classified?

- A. Synovial
- B. Symphysis**
- C. Syndesmosis
- D. Gomphosis

Intervertebral joints are symphysis joints, a type of cartilaginous joint. Adjacent vertebral bodies are bound by an intervertebral disc, a fibrocartilaginous structure with an outer annulus fibrosus and inner nucleus pulposus. This configuration creates a strong, limited-movement connection that also cushions loads. While the facet joints between the articular processes are synovial joints, the joints between the vertebral bodies themselves—the intervertebral joints—are symphyses.

**7. Ponticulus posticus is an anomaly associated with which vertebra?
(Alternate phrasing)**

- A. C1**
- B. C2
- C. C5
- D. C7

Ponticulus posticus, also called the arcuate foramen, is an ossified band of the posterior atlanto-occipital ligament that forms a bony bridge over the groove for the vertebral artery on the superior surface of the first cervical vertebra. This feature is specific to the atlas (C1), so the anomaly is associated with C1. It isn't a feature of the axis (C2) or the lower cervical vertebrae like C5 or C7. Some individuals have this ossification as an incidental finding, and in rare cases it can affect vertebral artery flow or neck mechanics.

8. Which shape best describes the lumbar vertebral foramen?

- A. Circular
- B. Oval
- C. Triangular**
- D. Rectangular

The shape of the vertebral foramen varies by region to match the surrounding bony walls and the neural structures it houses. In the lumbar spine, the neural canal is large to accommodate the cauda equina, and the walls formed by the body in front and the pedicles and laminae on the sides and back create a three-sided, triangular outline. That makes the lumbar vertebral foramen best described as triangular.

9. Intervertebral joints are classified as which type?

- A. Symphysis**
- B. Synovial
- C. Gomphosis
- D. Syndesmosis

Intervertebral joints are a symphysis, a type of cartilaginous joint formed by the fibrocartilaginous intervertebral disc between adjacent vertebral bodies. This makes them secondary cartilaginous joints that allow only limited movement (amphiarthrosis) and serve as shock absorbers to preserve stability during load-bearing. Unlike synovial joints, there is no joint cavity with synovial fluid. They are also distinct from other joint types: a gomphosis is tooth in a socket, and a syndesmosis is a fibrous joint united by interosseous ligaments.

10. Which joint is located at the junction between the last lumbar vertebra and the first sacral segment?

- A. L4-L5 facet joint
- B. L5-S1 facet joint**
- C. Sacroiliac joint
- D. Intervertebral disc between L5 and S1

At the lumbosacral junction, the connection between the last lumbar vertebra and the first sacral segment is the L5–S1 facet joint. This joint is formed by the inferior articular facet of L5 and the superior articular facet of S1 and lies in the posterior elements of the spine. It is a synovial plane (zygapophysial) joint that allows small gliding movements and helps stabilize the transition from the lumbar to the sacral region. The other options don't fit: the L4–L5 facet joint is higher up, the sacroiliac joint connects the sacrum to the ilium, and while there is an intervertebral disc between L5 and S1, the question points to the facet joint that directly articulates at this junction.

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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://spinalanatomy3.examzify.com>

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

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