Free A Spinal Exam 4 Practice (Sample)

Study Guide

Everything you need from our exam experts!

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. Which cranial nerves are associated with the middle cranial fossa?

A. CN I-III (1-3)

B. CN II-VI (2-6)

C. CN VII-XII (7-12)

D. CN IV-X (4-10)

2. Ossification of the ligamentum flavum is most commonly observed in which spinal regions?

A. Thoracic and lumbar regions (thoracolumbar)

B. Cervical region

C. Sacral region

D. Entire spine equally

3. What is disc sequestration?

A. A free disc fragment with no attachment to the host disc

B. A misfit fragment in the spinal canal

C. A herniation that remains attached to the host disc

D. A fragment within PLL

4. What is the most common curve pattern in adolescent idiopathic scoliosis?

A. Left thoracic curve

B. Right thoracic curve 90% of the time

C. Double major curve

D. Thoracic kyphosis

5. If a herniation penetrates the PLL, which term applies?

A. Transligamentous extrusion

B. Subligamentous extrusion

C. Extrusion

D. Sequestration

6. Where is aqueous humor produced?

A. Lens

B. Ciliary body

C. Iris

D. Vitreous body

7. The jugular foramen transmits which cranial nerves?

A. CN IX, X, XI (9, 10, 11)

B. CN VII, VIII

C. CN II, III

D. CN XII

8. Which bones form the floor of the temporal fossa?

A. Frontal, Parietal, Temporal, And Sphenoid Bones

B. Occipital, Temporal, Parietal, And Zygomatic Bones

C. Frontal, Sphenoid, Occipital, And Temporal Bones

D. Parietal, Temporal, Occipital, And Mandible Bones

9. What degree of deviation increases the likelihood of worsening infantile scoliosis?

A. Less than 10 degrees

B. 15 to 25 degrees

C. 25 to 30 degrees

D. Greater than 30 degrees

10. Which structures may be compressed by ossified ligamentum flavum?

A. Brainstem

B. Spinal Cord, Spinal Nerves, and Cauda Equina

C. Heart and Great Vessels

D. Cerebellum

Answers

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

Explanations

1. Which cranial nerves are associated with the middle cranial fossa?

A. CN I-III (1-3)

B. CN II-VI (2-6)

C. CN VII-XII (7-12)

D. CN IV-X (4-10)

The middle cranial fossa is defined by openings in the sphenoid bone that nerves use to reach the orbit and face. The optic nerve travels through the optic canal in the sphenoid and enters the orbit. The oculomotor and trochlear nerves reach the orbit via the superior orbital fissure, and so does the ophthalmic division of the trigeminal nerve. The maxillary division of the trigeminal nerve passes through the foramen rotundum, another opening in this fossa. The abducens nerve runs in the cavernous sinus and then enters the orbit through the superior orbital fissure. Taken together, these nerves are associated with the middle cranial fossa: cranial nerves II, III, IV, V1, V2, and VI.

2. Ossification of the ligamentum flavum is most commonly observed in which spinal regions?

A. Thoracic and lumbar regions (thoracolumbar)

B. Cervical region

C. Sacral region

D. Entire spine equally

The concept being tested is where ossification of the ligamentum flavum most often occurs along the spine. This process shows a clear predilection for the thoracic region, and it frequently extends into the upper lumbar spine, creating a thoracolumbar pattern. Biomechanical stresses at the thoracolumbar junction, combined with age-related degenerative changes in the ligament, promote calcification in these segments. The cervical region is less commonly involved, and the sacral area has different anatomy with less flavum tissue to ossify, so involvement there is rare. Therefore, the typical and most common distribution is the thoracolumbar region, making that choice the best fit.

3. What is disc sequestration?

A. A free disc fragment with no attachment to the host disc

B. A misfit fragment in the spinal canal

C. A herniation that remains attached to the host disc

D. A fragment within PLL

Disc sequestration is when a piece of intervertebral disc breaks completely away from the main disc and becomes a free fragment floating in the spinal canal. The crucial feature is that there is no attachment to the host disc anymore, so the fragment can move and press on nerve structures independently. This distinguishes it from a protrusion, where the bulge remains attached to the disc, and from an extrusion, where a fragment has herniated through the annulus but still maintains some connection to the disc. The fragment may lie within the posterior longitudinal ligament or roam in the canal, but the defining idea is the complete separation from the parent disc. Clinically, a sequestrated fragment often causes acute nerve root compression and may require surgical removal if symptoms are significant.

4. What is the most common curve pattern in adolescent idiopathic scoliosis?

A. Left thoracic curve

B. Right thoracic curve 90% of the time

C. Double major curve

D. Thoracic kyphosis

Adolescent idiopathic scoliosis almost always shows a thoracic curve that bends to the right. This right thoracic pattern is the typical AIS presentation, seen in the vast majority of patients as the spine tilts and the ribs on the convex (right) side rotate, creating the characteristic rib hump. Left-sided thoracic curves are much less common and would raise questions for other causes, while a double major curve describes two primary curves rather than the single most common pattern. Thoracic kyphosis is about the spine's side view curvature, not the primary lateral (coronal) curve pattern, so it isn't the hallmark pattern of AIS. In short, the most common AIS pattern is a right thoracic curve, often cited as occurring in a large majority of cases.

5. If a herniation penetrates the PLL, which term applies?

A. Transligamentous extrusion

B. Subligamentous extrusion

C. Extrusion

D. Sequestration

When a disc herniation breaches the posterior longitudinal ligament, the term that fits describes material that has penetrated through that ligament into the epidural space. This is transligamentous extrusion. The name highlights the key event: the PLL has been breached by the herniated material and the fragment extends beyond it. If the material remains beneath the PLL, that would be a subligamentous extrusion, where the fragment doesn't cross the ligament. Extrusion in general means the disc material has pushed out, often still connected by a neck to the parent disc, while sequestration refers to a fragment that has become completely separated from the disc. In this scenario, since the PLL is penetrated, transligamentous extrusion is the most precise description.

6. Where is aqueous humor produced?

A. Lens

B. Ciliary body

C. Iris

D. Vitreous body

The fluid that nourishes and keeps the eye pressurized is produced by the ciliary body, specifically the ciliary processes of the ciliary epithelium. These cells actively secrete aqueous humor into the posterior chamber, from where it flows through the pupil into the anterior chamber and drains out via the trabecular meshwork. This production involves ion transport and water follows by osmotic flow, supporting nutrients for avascular structures like the cornea and lens and helping maintain intraocular pressure. The other structures don't generate this fluid. The lens is largely avascular and doesn't secrete aqueous humor. The iris is part of the anterior uvea but doesn't produce the fluid. The vitreous body is a gel behind the lens and is not continuously produced in adulthood.

7. The jugular foramen transmits which cranial nerves?

A. CN IX, X, XI (9, 10, 11)

B. CN VII, VIII

C. CN II, III

D. CN XII

The jugular foramen serves as the exit for nerves that innervate the throat and neck, paired with the major venous drainage route from the brain. It transmits the glossopharyngeal nerve, the vagus nerve, and the spinal accessory nerve, all traveling together to reach their targets in the throat, larynx, and neck. The internal jugular vein also passes through this opening as the main outflow for intracranial blood. Other cranial nerves exit the skull through different foramina—facial and vestibulocochlear through the internal acoustic meatus, the optic nerve through the optic canal, the oculomotor and trochlear nerves through the superior orbital fissure, and the hypoglossal nerve through the hypoglossal canal—so those options don't fit the jugular foramen.

8. Which bones form the floor of the temporal fossa?

A. Frontal, Parietal, Temporal, And Sphenoid Bones

B. Occipital, Temporal, Parietal, And Zygomatic Bones

C. Frontal, Sphenoid, Occipital, And Temporal Bones

D. Parietal, Temporal, Occipital, And Mandible Bones

The floor of the temporal fossa is formed by a combination of bones that meet at the temple region: the frontal bone at the anterior edge, the parietal bone along the superior aspect, the temporal bone on the lateral side, and the sphenoid bone (through its greater wing) contributing to the deeper medial part. This mixture of bones creates the base of the temporal fossa rather than a single bone sole. The other bones listed don't form this floor: the occipital bone lies posteriorly and doesn't contribute to the floor of the temple area; the zygomatic bone sits more at the cheek area and forms part of the lateral wall, not the floor; the mandible is the lower jaw and is not part of the cranial floor.

9. What degree of deviation increases the likelihood of worsening infantile scoliosis?

A. Less than 10 degrees

B. 15 to 25 degrees

C. 25 to 30 degrees

D. Greater than 30 degrees

In infantile scoliosis, how large the curve is at diagnosis helps predict whose spine will worsen as the child grows. The spine in infancy is still developing, and the forces of growth, gravity, and rotation can drive a curve to become more pronounced over time. Curves that are relatively small—typically under about 30 degrees—tend to stabilize or even improve as growth proceeds, especially with careful monitoring and, if needed, conservative management. When the curve is greater than about 30 degrees, the likelihood of progression increases because the existing deformity already reflects a significant disruption in spinal alignment. Growth continues to amplify the imbalance, and conservative measures often struggle to halt this trajectory. That higher initial angle is a red flag that the scoliosis is more prone to worsen, which is why it's associated with a higher chance of needing more aggressive treatment to control progression. So, when the initial deviation exceeds roughly 30 degrees, clinicians expect a greater risk of worsening, guiding closer follow-up and discussion of treatment options to manage progression.

10. Which structures may be compressed by ossified ligamentum flavum?

A. Brainstem

B. Spinal Cord, Spinal Nerves, and Cauda Equina

C. Heart and Great Vessels

D. Cerebellum

Ossified ligamentum flavum narrows the spinal canal from within, so it can press on the neural elements that reside there. The spinal cord sits inside the canal, and the nerve roots exit and travel within or just outside this space as the spinal nerves and, lower down, the cauda equina. When the ligament thickens or ossifies, it reduces space behind the lamina and can compress these structures. Structures outside the spinal canal, such as the brainstem or cerebellum in the skull, or the heart and great vessels in the chest, aren't affected by a ligament in the spine, so they aren't the typical targets of this compression. Therefore, the neural elements that may be compressed are the spinal cord, spinal nerves, and cauda equina.

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://freeaspinal4.examzify.com

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