National Board of Chiropractic Examiners (NBCE) Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

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 **16**

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 of these decreases facet weight bearing?

A. Extension of the spine

B. Flexion of the spine

C. Rotation of the spine

D. Side bending of the spine

2. A patient experiences recurring unilateral periorbital pain, lacrimation, and rhinorrhea. What is this most indicative of?

A. Migraine

B. Cluster headache

C. Tension headache

D. Cervicogenic headache

3. The Ferguson gravity line is extended vertically from which vertebra?

A. L1

B. L2

C. L3

D. S1

4. What is most likely to reduce the lumen of an intervertebral foramen?

A. Hypertrophy of the flaval ligament

B. Compression of the nucleus pulposus

C. Enlargement of the articular processes

D. Calcification of the supraspinous ligament

5. What is the primary concern when handling X-ray procedures for patients with a higher body mass index?

A. Image distortion

B. Increased radiation dose

C. Poor image quality

D. Prolonged exposure time

6. This type of muscle tissue is involuntary and found in the walls of organs:

A. Skeletal muscle

B. Cardiac muscle

C. Smooth muscle

D. Striated muscle

7. Pink, frothy sputum is most characteristic of which condition?

A. Pulmonary embolism

B. Pulmonary edema

C. Pneumonia

D. Chronic bronchitis

8. A hair-on-end radiographic appearance of the skull is most likely associated with which condition?

A. Thalassemia major

B. Sickle cell anemia

C. Iron-deficiency anemia

D. Polycythemia vera

9. What is the standard temperature in degrees Fahrenheit for proper development in an automatic processor?

A. 70 degrees F

B. 75 degrees F

C. 80 degrees F

D. 85 degrees F

10. Group 1a afferents arise from which type of receptors?

A. Joint receptors

B. Muscle spindles

C. Mechanoreceptors

D. Thermoreceptors

Answers

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

Explanations

1. Which of these decreases facet weight bearing?

A. Extension of the spine

B. Flexion of the spine

C. Rotation of the spine

D. Side bending of the spine

Flexion of the spine decreases facet weight bearing due to the mechanics involved in spinal movement. When the spine is flexed, the anterior parts of the vertebrae move closer together, which reduces the contact forces on the posterior facets. As the angle at the facet joints changes during flexion, the load on these joints is lessened as the weight of the upper body shifts forward and downward. This mechanism allows for greater movement in the anterior direction, resulting in decreased pressure on the facet joints and, consequently, less weight bearing. In contrast, extension of the spine would generally increase the weight bearing on the facets because it causes the spine to arch backward, increasing the contact pressure between the facets. Similarly, rotation and side bending create various shifts in load distribution, but do not lead to the same reduction in facet joint pressures as seen with flexion. Therefore, flexion uniquely allows for a decrease in the weight bearing on the facet joints.

2. A patient experiences recurring unilateral periorbital pain, lacrimation, and rhinorrhea. What is this most indicative of?

A. Migraine

B. Cluster headache

C. Tension headache

D. Cervicogenic headache

The presentation of recurring unilateral periorbital pain, along with symptoms such as lacrimation and rhinorrhea, is highly indicative of a cluster headache. This type of headache is characterized by its severe, penetrating pain usually localized around one eye or temple and is often accompanied by autonomic symptoms, including excessive tearing (lacrimation) and nasal discharge (rhinorrhea). The unilateral and recurring nature of the headaches aligns well with the episodic pattern typically observed in cluster headaches. Cluster headaches are distinct from migraines, which can also cause severe headaches but are usually bilateral and have different accompanying symptoms, such as nausea and sensitivity to light. Tension headaches are generally characterized by a dull, bilateral ache with tightness or pressure, and they lack the severe, localized pain and autonomic features found in cluster headaches. Cervicogenic headaches originate from the cervical spine or musculoskeletal structures in the neck and do not primarily feature the autonomic symptoms associated with cluster headaches. Therefore, the symptoms described strongly point to cluster headaches being the correct identification.

3. The Ferguson gravity line is extended vertically from which vertebra?

A. L1

B. L2

C. L3

D. S1

The Ferguson gravity line is a significant reference line in chiropractic and spinal analysis, as it helps assess postural alignment and the distribution of body weight. This line is typically extended vertically from the sacral promontory, which corresponds to the S1 vertebra. The purpose of the Ferguson gravity line is to evaluate how well the line of gravity passes through the body's center of mass and its relationship to the spine and pelvis. In this case, selecting L3 as the vertebra from which to extend the Ferguson gravity line is not aligned with standard anatomical references. The correct point of origin for this line is S1 because it provides an accurate representation of how gravity affects the pelvis and lumbar spine, influencing postural balance and spinal health. Therefore, when analyzing structural alignment and assessing the mechanics of the body, the choice of S1 as the origin allows practitioners to gain insights into potential areas of concern regarding posture and spinal integrity.

4. What is most likely to reduce the lumen of an intervertebral foramen?

A. Hypertrophy of the flaval ligament

B. Compression of the nucleus pulposus

C. Enlargement of the articular processes

D. Calcification of the supraspinous ligament

Hypertrophy of the flaval ligament is the most likely factor to reduce the lumen of an intervertebral foramen because it involves the thickening of the ligament that sits within the vertebral canal. As this ligament enlarges, it encroaches upon the space within the foramina, which can subsequently compress the nerves passing through these openings. This situation can lead to neural compromise, contributing to conditions such as radiculopathy. The other options can cause changes in the spinal structure, but they typically do not directly affect the intervertebral foramen lumen in the same manner. Compression of the nucleus pulposus relates more to disc bulging and does not have a direct effect on the foramen itself, while enlargement of the articular processes could potentially lead to osteophytic changes but doesn't as effectively narrow the foramen as ligamentous changes do. Calcification of the supraspinous ligament may contribute to overall spinal rigidity but does not directly narrow the intervertebral foramen space significantly.

5. What is the primary concern when handling X-ray procedures for patients with a higher body mass index?

A. Image distortion

B. Increased radiation dose

C. Poor image quality

D. Prolonged exposure time

When considering X-ray procedures for patients with a higher body mass index (BMI), the primary concern centers around the quality of the images produced. Patients with a higher BMI may necessitate adjustments in technique to ensure that the X-rays penetrate adequately through thicker layers of tissue and fat. If these adjustments are not made, the resulting images can be unclear or of poor quality. This makes it challenging to accurately diagnose any underlying conditions or issues. While image distortion can occur in various contexts and increased radiation doses are a valid concern, these are generally managed through proper technique and machine settings. Prolonged exposure time may also be a consideration, but it does not directly address the fundamental issue of capturing a clear and diagnostic-quality image, which is critical for effective patient care. Therefore, the decline in image quality is the key issue when dealing with patients who have a higher BMI, as it can directly impact diagnostic outcomes.

6. This type of muscle tissue is involuntary and found in the walls of organs:

A. Skeletal muscle

B. Cardiac muscle

C. Smooth muscle

D. Striated muscle

Smooth muscle tissue is characterized as involuntary, meaning that it is not consciously controlled. This type of muscle is primarily found in the walls of hollow organs such as the intestines, bladder, and blood vessels. The contraction of smooth muscle stimulates movements such as peristalsis in the digestive tract and controls the flow of blood through the circulatory system. Smooth muscle fibers are non-striated and have a spindle shape, which distinguishes them from skeletal muscle and cardiac muscle. While skeletal muscle is voluntary and striated, allowing for conscious movement, and cardiac muscle is also striated but functions involuntarily to pump blood, smooth muscle operates automatically, responding to internal stimuli and regulating bodily functions without conscious effort from the individual. This makes smooth muscle crucial for maintaining homeostasis and the proper function of various organ systems.

7. Pink, frothy sputum is most characteristic of which condition?

A. Pulmonary embolism

B. Pulmonary edema

C. Pneumonia

D. Chronic bronchitis

Pink, frothy sputum is most characteristic of pulmonary edema, which occurs when excess fluid accumulates in the lungs. This condition can arise from various causes, most commonly heart failure, where the heart is unable to pump effectively, leading to fluid leakage into the alveoli. The presence of blood mixed with the fluid gives the sputum a pink coloration, and the frothy nature is due to the type of fluid that is produced, which includes air bubbles mixed with fluid. In cases of pulmonary edema, patients often present with symptoms such as shortness of breath, a feeling of suffocation, and the aforementioned pink, frothy sputum. This distinctive sputum serves as a critical clinical sign that helps differentiate pulmonary edema from other respiratory conditions.

8. A hair-on-end radiographic appearance of the skull is most likely associated with which condition?

A. Thalassemia major

B. Sickle cell anemia

C. Iron-deficiency anemia

D. Polycythemia vera

The hair-on-end radiographic appearance of the skull is most commonly associated with thalassemia major. This condition is a form of inherited blood disorder characterized by an abnormal hemoglobin production, which leads to anemia. To compensate for the low hemoglobin levels, the body overproduces erythrocytes, resulting in expansion of the bone marrow. The characteristic "hair-on-end" appearance on radiographs results from the prominent trabecular pattern of the bones in the skull, which develops due to the increased hematopoiesis (blood cell formation) in response to anemia. This alteration in the structure can be visualized clearly in radiographic imaging, contrasting with other conditions listed. In contrast, other conditions like sickle cell anemia can also cause bone changes but typically present with different radiographic findings, such as "crew cut" appearances due to splenic auto-infarction and other complications. Iron-deficiency anemia may not lead to significant changes in bone structure visible on imaging, and polycythemia vera involves increased red blood cells but does not typically produce the same skeletal abnormalities.

9. What is the standard temperature in degrees Fahrenheit for proper development in an automatic processor?

A. 70 degrees F

B. 75 degrees F

C. 80 degrees F

D. 85 degrees F

The standard temperature for the proper development of film in an automatic processor is typically set at 75 degrees Fahrenheit. This temperature is essential because it ensures that the chemical reactions involved in the development process occur at optimal rates, leading to the best possible image quality. Film development requires precise control of temperature, as variations can affect contrast, density, and overall clarity of the images produced. Setting the temperature too low may result in under-development, while too high a temperature can lead to over-development and possible damage to the film. Thus, maintaining the processor at 75 degrees Fahrenheit is crucial for consistent and reliable results in photographic processing.

10. Group 1a afferents arise from which type of receptors?

A. Joint receptors

B. Muscle spindles

C. Mechanoreceptors

D. Thermoreceptors

Group 1a afferents are primarily associated with muscle spindles, which are specialized sensory receptors located within the belly of muscles. These receptors are responsible for detecting changes in muscle length (stretch) and the rate of that change, providing crucial feedback to the central nervous system about muscle dynamics. The muscle spindle consists of intrafusal muscle fibers, which are innervated by the Group 1a afferents. These afferents respond to the stretch of the muscle and convey information about proprioception, essential for coordinating movement and maintaining posture. Their role is vital in reflex actions, enabling the body to react quickly to changes in muscle length and tension. While joint receptors and mechanoreceptors also play important roles in sensory perception, they are not specifically linked to Group 1a afferents. Joint receptors are associated with the position and movement of joints, and mechanoreceptors can include a variety of sensory nerve endings responding to mechanical stimuli. Thermoreceptors, on the other hand, are involved in detecting temperature changes and do not have a direct relationship with Group 1a afferents.

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://nbce.examzify.com

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