

American Board of Orthodontics (ABO) Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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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. Chromium cobalt alloy wires typically contain what percentage of cobalt?**
 - A. 20%**
 - B. 30%**
 - C. 40%**
 - D. 50%**

- 2. What type of bone formation occurs without modeling activation?**
 - A. Woven bone formation**
 - B. Lamellar bone formation**
 - C. Achieved through direct resorption**
 - D. Not influenced by strain**

- 3. What is the term used for the parallel relationship of maxillary incisors to the lower lip?**
 - A. Consonant**
 - B. Symmetrical**
 - C. Curvilinear**
 - D. Aligned**

- 4. What phenomenon is typically associated with increased lower incisor flaring during Carriere treatment?**
 - A. Reduction in overbite**
 - B. Increase in overbite**
 - C. Improvement of Class I relationship**
 - D. Deepening of the bite**

- 5. How are teeth typically affected by AI Type 1C?**
 - A. Hypoplastic enamel on selected teeth**
 - B. All teeth affected more severely**
 - C. Only incisors are impacted**
 - D. Teeth exhibit normal crown morphology**

- 6. What percentage of plasma calcium is considered free or ionized?**
- A. 25%**
 - B. 40%**
 - C. 50%**
 - D. 75%**
- 7. What method can be used to increase crown height without allowing bone to follow?**
- A. Intrusive forces**
 - B. Extrusive forces with concomitant fiberotomy**
 - C. Retraction of tissue**
 - D. Direct bone augmentation**
- 8. What impact do interproximal craters have on periodontal diagnoses with panoramic imaging?**
- A. They are easily captured**
 - B. They lead to misdiagnosis**
 - C. They are clearly visible**
 - D. They provide clear images of periodontal health**
- 9. What is the expected FOV for a full head CBCT scan?**
- A. 10-15 cm**
 - B. 5-7 cm**
 - C. 7-10 cm**
 - D. Greater than 15 cm**
- 10. Which group has higher failure rates with TADS according to Han?**
- A. Adults**
 - B. Adolescents**
 - C. Both groups**
 - D. Neither group**

Answers

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

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Explanations

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1. Chromium cobalt alloy wires typically contain what percentage of cobalt?

- A. 20%**
- B. 30%**
- C. 40%**
- D. 50%**

Chromium cobalt alloy wires are used in orthodontics primarily for their properties, which include strength, stiffness, and resistance to corrosion. The typical composition of these wires includes a significant percentage of cobalt, generally around 40%. This level of cobalt is important as it contributes to the wire's mechanical properties and its ability to withstand the forces used during orthodontic treatment. The presence of cobalt enhances the wire's overall performance, making it suitable for various clinical situations where durability and resilience are required. The other percentages listed, such as 20%, 30%, and 50%, are not representative of the standard compositions found in these alloys, as they either underestimate or overestimate the cobalt content, failing to provide the optimal balance of properties desired in orthodontic materials.

2. What type of bone formation occurs without modeling activation?

- A. Woven bone formation**
- B. Lamellar bone formation**
- C. Achieved through direct resorption**
- D. Not influenced by strain**

Woven bone formation occurs as an initial response in the process of bone healing or development. This type of bone is characterized by a haphazard organization of collagen fibers and is typically formed rapidly in response to injury or during fetal development. The key aspect of woven bone formation is that it does not require modeling activation, which means it is not reliant on the typical sequential processes seen in more organized bone structures. In contrast, lamellar bone formation is a more organized and mature type of bone that involves a more complex process of bone remodeling and is influenced by mechanical strain. Lamellar bone is formed after woven bone and is characterized by its orderly structure, which provides greater strength. Resorption processes involve the removal of bone tissue, which is also distinct from the primary formation of woven bone. Additionally, the assertion that formation is not influenced by strain is misleading. Bone formation, especially in the context of endochondral ossification, is often influenced by mechanical loads and activity levels, which help shape the final structure of lamellar bone. Therefore, woven bone formation's characteristic of developing rapidly and without the need for modeling activation highlights its essential role in initial bone development and healing scenarios.

3. What is the term used for the parallel relationship of maxillary incisors to the lower lip?

- A. Consonant**
- B. Symmetrical**
- C. Curvilinear**
- D. Aligned**

The term that describes the parallel relationship of maxillary incisors to the lower lip is consonant. This alignment is primarily significant in orthodontics as it reflects an aesthetic harmony in the smile. A consonant relationship suggests that the incisal edges of the maxillary incisors generally follow the curve of the lower lip, contributing to an attractive smile arch and enhancing facial esthetics. This alignment is important for achieving a well-balanced and proportionate appearance in dental aesthetics, allowing for a natural and pleasing look when a patient smiles. In orthodontic practice, achieving this relationship not only improves facial aesthetics but also enhances functional aspects of the bite. Observing this relationship helps orthodontists plan appropriate movements of teeth to ensure that the final occlusion is both functional and aesthetically pleasing.

4. What phenomenon is typically associated with increased lower incisor flaring during Carriere treatment?

- A. Reduction in overbite**
- B. Increase in overbite**
- C. Improvement of Class I relationship**
- D. Deepening of the bite**

In Carriere treatment, the phenomenon of increased lower incisor flaring is often associated with a reduction in overbite. This treatment approach is designed to correct dental and skeletal discrepancies, particularly in cases where there is a vertical dimension change or anterior teeth positioning adjustment. When the overbite is reduced, the anterior teeth, particularly the lower incisors, tend to extrude slightly. This change can lead to increased flaring as the lower incisors move buccally to maintain optimal esthetics and functional occlusion. By achieving a reduction in overbite, there is often a corresponding adjustment in the alignment and angulation of the anterior teeth to ensure proper interdigitation during closure, which promotes effective adjustment and stability of the occlusion. Understanding this relationship is essential in orthodontics, as it allows practitioners to anticipate and manage the positioning of the incisors effectively throughout treatment. In contrast, an increase in overbite or the deepening of the bite typically does not promote flaring of the incisors, as these changes often involve different mechanical and dental adjustments.

5. How are teeth typically affected by AI Type 1C?

- A. Hypoplastic enamel on selected teeth**
- B. All teeth affected more severely**
- C. Only incisors are impacted**
- D. Teeth exhibit normal crown morphology**

AI Type 1C, which refers to Amelogenesis Imperfecta Type 1C, typically presents with a more generalized defect in enamel formation. In this condition, all teeth are affected, and the severity of the enamel deficiency is notably pronounced across the dental arch. Patients with this type often experience significant enamel hypoplasia, resulting in a range of issues such as increased susceptibility to caries, sensitivity, and aesthetic concerns. The characteristic feature of AI Type 1C is that it does not restrict its impact to a few selected teeth or just the incisors; rather, it manifests in all teeth more severely than other types. This comprehensive involvement is what distinguishes it from forms of amelogenesis imperfecta that may affect only specific groups of teeth or exhibit variable severity among them. Consequently, the features of AI Type 1C include a consistent and widespread presence of enamel hypoplasia across both primary and permanent dentition. This understanding helps clarify how the disorder impacts overall oral health and treatment considerations for affected individuals.

6. What percentage of plasma calcium is considered free or ionized?

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

About 50% of plasma calcium is considered free or ionized. This ionized calcium is not bound to proteins or anions and is the biologically active form that is crucial for various physiological functions, including muscle contraction, nerve conduction, and blood clotting. Understanding the significance of ionized calcium is essential, especially in clinical settings where calcium levels can indicate different health issues. The rest of the calcium in plasma is typically bound to proteins, mainly albumin, or complexed with anions such as bicarbonate and citrate, which do not contribute to its physiological activity. Knowing the proportion of ionized calcium helps in interpreting calcium-related laboratory results and managing conditions like hypocalcemia or hypercalcemia effectively.

7. What method can be used to increase crown height without allowing bone to follow?

A. Intrusive forces

B. Extrusive forces with concomitant fiberotomy

C. Retraction of tissue

D. Direct bone augmentation

Increasing crown height while preventing the associated bone changes can be particularly challenging in orthodontic treatment. The correct approach involves using extrusive forces along with procedures such as fiberotomy. By applying extrusive forces on the dentition, the crown can be brought into a more occlusally favorable position. However, without additional methods, those forces could also influence the surrounding bone, resulting in undesired changes. The key element here is fiberotomy, which is a surgical procedure that severs the periodontal fibers surrounding the teeth. By doing this, the normal anchorage provided by the bone and periodontal attachment is altered, allowing for the movement of the crown without parallel movement of the alveolar bone. This means that the tooth can be extruded effectively to enhance crown height while minimizing or preventing any vertical bone loss or adaptation that would typically accompany such movements. In contrast, other methods may not achieve the same outcome—intrusive forces would generally lead to both crown and root movement, thereby affecting the bone as well. Direct bone augmentation, while potentially increasing the crown height, does not specifically influence just the crown without impacting the bony architecture. Thus, the combination of extrusive forces and fiberotomy creates a unique approach that allows for vertical crown height increase while maintaining the integrity

8. What impact do interproximal craters have on periodontal diagnoses with panoramic imaging?

A. They are easily captured

B. They lead to misdiagnosis

C. They are clearly visible

D. They provide clear images of periodontal health

Interproximal craters can significantly mislead practitioners during periodontal diagnoses using panoramic imaging. These craters, which are concavities found between adjacent teeth, can be difficult to assess accurately on panoramic films due to the inherent limitations of this imaging modality. Panoramic images provide a two-dimensional view of a three-dimensional structure, which may distort the appearance of interproximal spaces and make craters harder to identify. As a result, their presence might not be evident, or may even be misrepresented on the imaging, leading to potential misdiagnosis of periodontal conditions. Understanding this is crucial for orthodontics and dentistry, as accurate diagnosis is foundational for developing effective treatment plans. The specific nature of how craters manifest in panoramic images can obscure subtle signs of periodontal disease, leading clinicians to overlook or misinterpret existing issues. This highlights the importance of using multiple diagnostic tools and techniques to ensure comprehensive evaluation of periodontal health.

9. What is the expected FOV for a full head CBCT scan?

- A. 10-15 cm
- B. 5-7 cm
- C. 7-10 cm
- D. Greater than 15 cm**

In a full head cone beam computed tomography (CBCT) scan, the expected field of view (FOV) is indeed greater than 15 cm. This extensive FOV is necessary to capture the complete anatomy of the head and neck, including the maxilla, mandible, and related structures. Full head scans are typically utilized to assess comprehensive dental and skeletal relationships, which require a wider imaging area to ensure that all relevant anatomical features are included. This includes evaluating conditions like impacted teeth, tumors, and the relationship of the jaw to the cranial base. Smaller FOVs are generally used for focused imaging of specific areas, such as single tooth assessments or localized regions of interest. These options, while useful in different contexts, do not encompass the requirements for a full head scan, which demands the broader range to accommodate all anatomical structures of interest.

10. Which group has higher failure rates with TADS according to Han?

- A. Adults
- B. Adolescents**
- C. Both groups
- D. Neither group

The indication that adolescents have higher failure rates with TADs (Temporary Anchorage Devices) is substantiated by various clinical studies, including research conducted by Han. In the realm of orthodontics, it has been observed that the biological and physiological differences between adults and adolescents can influence the success of anchorage devices. Adolescents often experience ongoing skeletal growth and development, which can complicate the stability and integration of TADs. The active remodeling of bone structures during this crucial developmental phase may lead to a higher likelihood of failure, as TADs rely on firm integration with the bone to maintain stability for orthodontic forces. In contrast, adults typically have reached skeletal maturity, which can result in more stable bone structures. Their bones are less likely to undergo the same level of remodeling that occurs in growing adolescents, hence potentially leading to lower failure rates for TADs in this group. Understanding these developmental differences is crucial for orthodontic treatment planning. The ability to predict the likelihood of success with TADs based on patient age and physiological status plays a significant role in achieving optimal treatment outcomes.

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://abo-orthodontics.examzify.com>

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

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