

ABO Advance Practice Test (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. Which optical measurement is critical for designing corrective eyeglasses?**
 - A. Vertex distance**
 - B. Pupil distance**
 - C. Base curve**
 - D. Frame width**

- 2. Which part of the eye has the greatest dioptric power?**
 - A. Cornea**
 - B. Lens**
 - C. Iris**
 - D. Retina**

- 3. What element is NOT influenced by the blinking action of the eyelids?**
 - A. Maintaining moisture on the eye surface**
 - B. Protecting from foreign objects**
 - C. Increasing temporal resolution**
 - D. Distributing tears evenly**

- 4. Should frame adjustments be made prior to measuring the fitting cross height for a progressive lens? True or False?**
 - A. True**
 - B. False**
 - C. Only if the patient requests it**
 - D. It's not necessary**

- 5. What are the five layers of the cornea from anterior to posterior?**
 - A. Epithelium, Bowman's Layer, Stroma, Descemet membrane, Endothelium**
 - B. Epithelium, Stroma, Endothelium, Retina, Ciliary Body**
 - C. Epithelium, Descemet membrane, Corneal stroma, Iris, Endothelium**
 - D. Epithelium, Bowman's Layer, Stroma, Retina, Endothelium**

- 6. Which set of numbers should be used when reading the base curve of a lens with a lens clock?**
- A. Red or minus**
 - B. Black or plus**
 - C. Green or neutral**
 - D. Blue or zero**
- 7. What happens to the light motion in meridians when the examiner approaches the patient's eye during retinoscopy?**
- A. The motion becomes stationary**
 - B. With motion is observed**
 - C. Against motion is always seen**
 - D. No change in motion**
- 8. What would be the true power change if a lens with a -2.00D power receives a -1.00D cylinder?**
- A. -1.00D**
 - B. -3.00D**
 - C. 0.00D**
 - D. -2.00D**
- 9. When new progressive lenses are delivered, where should the fitting cross be positioned?**
- A. Below the pupil**
 - B. Directly in front of the pupil**
 - C. Above the pupil**
 - D. At the bridge of the nose**
- 10. Which area of the retina is capable of perceiving the greatest amount of detail?**
- A. Macula**
 - B. Fovea Centrallis**
 - C. Peripheral retina**
 - D. Ridge area**

Answers

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

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Explanations

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1. Which optical measurement is critical for designing corrective eyeglasses?

- A. Vertex distance
- B. Pupil distance**
- C. Base curve
- D. Frame width

When designing corrective eyeglasses, pupil distance is critical because it determines the precise location of the optical center of the lenses in relation to the wearer's eyes. This measurement ensures that when a person looks through the lenses, their line of sight aligns accurately with the optical center, which is essential for optimal vision correction. If the pupil distance is not measured accurately, the effectiveness of the prescription can be compromised, leading to visual discomfort, blurry vision, or even headaches due to lens alignment issues. In the context of corrective eyewear, factors like vertex distance, base curve, and frame width are also important, but they primarily affect the overall fitting and aesthetics of the glasses rather than the specific optical alignment necessary for effective vision correction. Vertex distance refers to the distance between the back of the lens and the front of the eye, which can impact the effective power of the lenses, while the base curve relates to the curvature of the lens and can affect how the lenses sit in the frame. Frame width, meanwhile, influences how comfortably the glasses fit the wearer and can affect the overall appearance but does not directly relate to the optical needs linked to the pupil distance.

2. Which part of the eye has the greatest dioptric power?

- A. Cornea**
- B. Lens
- C. Iris
- D. Retina

The cornea has the greatest dioptric power among the structures of the eye. Dioptric power refers to the ability of a lens to bend light, which is measured in diopters. The cornea contributes the most to the eye's total refractive power due to its curved shape and the significant difference in refractive index between air and the corneal tissue. While the lens also has dioptric power and can change its shape to focus on objects at varying distances (accommodation), the cornea remains responsible for the majority of light bending as it is the first major refracting surface that light encounters. The corneal surface is also more curved than the lens's surface, which enhances its ability to refract light. The iris, primarily involved in controlling the amount of light entering the eye by adjusting the size of the pupil, does not contribute to dioptric power. It plays a role in regulating light but is not a refractive structure. Likewise, the retina is crucial for converting light images into neural signals but does not bend light or have dioptric power. Therefore, while the lens and other structures play important roles in vision, it's the cornea that has the greatest dioptric power.

3. What element is NOT influenced by the blinking action of the eyelids?

- A. Maintaining moisture on the eye surface**
- B. Protecting from foreign objects**
- C. Increasing temporal resolution**
- D. Distributing tears evenly**

The action of blinking plays a significant role in several functions related to the eyes. Blinking helps maintain moisture on the eye surface by spreading the tear film, which is crucial for keeping the eyes hydrated and comfortable. Additionally, it serves as a protective mechanism that shields the eyes from foreign objects and potential irritants, ensuring a clearer field of vision and reducing the risk of injury. When considering the options, increasing temporal resolution refers to the ability of the visual system to perceive changes in the environment over time, such as the ability to detect rapid movements or flickering lights. This function is more closely linked to the processing capabilities of the visual system in the brain rather than directly influenced by the mechanical action of blinking. Therefore, while blinking improves comfort and protection, it does not increase the temporal resolution of vision. In summary, the correct answer highlights that the aspect of vision improvement related to temporal resolution operates at a neural level, independent of the blinking action.

4. Should frame adjustments be made prior to measuring the fitting cross height for a progressive lens? True or False?

- A. True**
- B. False**
- C. Only if the patient requests it**
- D. It's not necessary**

Making frame adjustments prior to measuring the fitting cross height for a progressive lens is essential for ensuring accuracy in the final fit of the lenses. The fitting cross height is the point on the lens where the optical characteristics are optimized for the wearer's vision, and improper adjustments can lead to misalignment, which negatively affects the performance of the progressive lenses. When the frame is not properly adjusted to the wearer's face — such as ensuring that the frames sit squarely on the nose and that the temple arms align with the sides of the head — it can result in incorrect height measurements. This is particularly important for progressive lenses, which have specific zones for distance, intermediate, and near vision. Accurate fitting cross heights are vital to ensure the patient experiences seamless vision transitions without distortion. Therefore, making frame adjustments is a crucial step before taking any measurements related to lens fitting, reinforcing the importance of this process in delivering high-quality optical care.

5. What are the five layers of the cornea from anterior to posterior?

- A. Epithelium, Bowman's Layer, Stroma, Descemet membrane, Endothelium**
- B. Epithelium, Stroma, Endothelium, Retina, Ciliary Body**
- C. Epithelium, Descemet membrane, Corneal stroma, Iris, Endothelium**
- D. Epithelium, Bowman's Layer, Stroma, Retina, Endothelium**

The five layers of the cornea from anterior to posterior are accurately listed as epithelium, Bowman's layer, stroma, Descemet membrane, and endothelium. The epithelium is the outermost layer, providing a protective barrier against environmental factors. Beneath it lies Bowman's layer, a tough sublayer that adds structural integrity. The stroma is the thickest layer and consists mostly of collagen fibers that maintain corneal shape and transparency. Descemet membrane is a thin but strong layer that serves as a basement membrane for the corneal endothelium, which is the innermost layer responsible for maintaining corneal hydration and clarity by regulating fluid transport. The other options contain incorrect information regarding the layers of the cornea. For instance, references to the retina or ciliary body, which are parts of the eye but not layers of the cornea, highlight misconceptions regarding eye anatomy. Understanding the correct layering is crucial for comprehending corneal health and addressing various ocular conditions.

6. Which set of numbers should be used when reading the base curve of a lens with a lens clock?

- A. Red or minus**
- B. Black or plus**
- C. Green or neutral**
- D. Blue or zero**

The base curve of a lens refers to the curvature of the front surface of the lens, and this curvature is typically measured in diopters, which can indicate whether the lens is convex (plus) or concave (minus). When using a lens clock, the reading is taken on a specific scale that represents these curvatures. The correct answer, which involves using the black or plus numbers, is accurate because the black numbers on most lens clocks correspond to the positive diopter measurements typically associated with convex lenses. These measurements indicate that the lens has a base curve that is convex in shape, which means it is thicker at the center than at the edges, suitable for correcting hyperopia (farsightedness) or for use in sunglass lenses and certain types of prescription eyeglasses. Using the black or plus numbers allows for the proper identification and categorization of lenses designed to provide support for certain visual deficiencies, which is crucial in optical settings when making prescriptions or fitting lenses into frames.

7. What happens to the light motion in meridians when the examiner approaches the patient's eye during retinoscopy?

- A. The motion becomes stationary**
- B. With motion is observed**
- C. Against motion is always seen**
- D. No change in motion**

During retinoscopy, as the examiner approaches the patient's eye, there is a specific change in the perceived motion of the light reflection, which is typically observed as the "with motion." This occurs because when the light beam from the retinoscope strikes the retina, it creates a reflex image that moves in the same direction as the light source when the examiner moves closer to the eye. As the examiner approaches, they are effectively reducing the distance between the retinoscope and the retina, leading to a shift in the way the light interacts with the eye's optical system. This reduction in distance allows for a clearer view of the light reflex and the interpretation of the motion reflects the refractive state of the eye. The "with motion" is indicative of a hyperopic (farsighted) condition, or, in a normal state, as the examiner moves closer, the light motion in the retina continues in the same direction as the light source. Understanding this motion during a retinoscopy is crucial for diagnosing refractive errors correctly, indicating to the examiner not only how to adjust instruments but also how to interpret findings accurately.

8. What would be the true power change if a lens with a -2.00D power receives a -1.00D cylinder?

- A. -1.00D**
- B. -3.00D**
- C. 0.00D**
- D. -2.00D**

To understand the true power change when a lens with a -2.00D spherical power receives a -1.00D cylindrical power, it's essential to first clarify how spherical and cylindrical powers work together to form the total power of a lens. The spherical power indicates the overall power of a lens used to correct for myopia or hyperopia. On the other hand, cylindrical power corrects for astigmatism and is considered a separate component. When a cylinder is introduced to a lens, it adds to the total power of the lens in a way that the cylindrical power is effectively considered additive to the spherical power. In this case, the starting power is -2.00D (the spherical component). Adding the -1.00D from the cylinder involves simply summing these values because they both have the same refractive effect, albeit in different orientations. Hence, we combine them as follows: -2.00D (spherical) + (-1.00D) (cylinder) results in a total power of -3.00D. This calculation demonstrates that when you introduce a -1.00D cylinder to a -2.00D lens, the true power change indeed results in a total of -3.00

9. When new progressive lenses are delivered, where should the fitting cross be positioned?

- A. Below the pupil**
- B. Directly in front of the pupil**
- C. Above the pupil**
- D. At the bridge of the nose**

The fitting cross of new progressive lenses should be positioned directly in front of the pupil to ensure optimal vision correction. This positioning allows the wearer to look through the appropriate optical zones of the lens for various viewing distances—distance, intermediate, and near vision. Proper alignment with the pupil is crucial, as it helps to minimize visual distortions and provides a more comfortable visual experience. When the fitting cross is accurately placed, it maximizes the effectiveness of the progressive design, allowing for a smooth transition between different prescriptions within the same lens. This ensures that the wearer can experience the full benefits of progressive lenses, which are designed to offer seamless vision correction across multiple distances without the visual jump that bifocals have.

10. Which area of the retina is capable of perceiving the greatest amount of detail?

- A. Macula**
- B. Fovea Centrallis**
- C. Peripheral retina**
- D. Ridge area**

The fovea centralis is the region in the retina that is specifically designed for high-acuity vision. It is found within the macula and contains a high concentration of cone photoreceptors, which are responsible for detecting fine details and color. The fovea is densely packed with these cones, allowing it to provide the sharpest vision compared to any other area in the retina. This is crucial for tasks that require detailed visual acuity, such as reading and recognizing faces. While the macula also plays a critical role in detailed vision, the fovea centralis is the precise spot where visual acuity is maximized due to its unique structure and concentration of photoreceptors. In contrast, the peripheral retina is less adept at resolving details and is more specialized for detecting motion and providing broader field vision. The ridge area is not a standard term in the context of retinal anatomy and is not relevant to perception of detail.

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://aboadvance.examzify.com>

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

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