

NATIONAL CONTACT LENS REGISTRY ADVANCED CERTIFICATION (NCLE-AC) PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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. What is a common side effect of antihistamines related to eye health?**
 - A. Increased ocular pressure
 - B. Dry eyes
 - C. Redness of the eyes
 - D. Increased tear production
- 2. Which condition is commonly associated with the aging process affecting lens flexibility?**
 - A. Myopia
 - B. Astigmatism
 - C. Presbyopia
 - D. Hyperopia
- 3. What are the characteristics of corneal edema?**
 - A. Clear vision, reduced K readings
 - B. Smoky vision, spectacle blur, increased K readings
 - C. Normal vision with light sensitivity
 - D. Severe pain and redness in the eye
- 4. What is the acceptable tolerance for overall lens diameter according to ANSI standards?**
 - A. +/-0.10 mm
 - B. +/-0.05 mm
 - C. +/-0.15 mm
 - D. +/-0.20 mm
- 5. What characteristic is vital for the healing process after radial keratoplasty?**
 - A. Use of antibiotics
 - B. Follow-up lens fitting
 - C. Central to host-graft interface
 - D. Patient's age

- 6. A warped lens will show how many base curves on the radiuscope and what type of power on the lensometer?**
- A. One/spherical
 - B. Two/sphero-cylindrical
 - C. One/sphero-cylindrical
 - D. Two/spherical
- 7. A soft contact lens that is too loose may show all of the following except?**
- A. Edge stand off
 - B. Limbal compression
 - C. Excessive lens movement
 - D. Distorted retinoscopy directly after blinking
- 8. Based on K readings of 44.00 at 180/41.00 at 90 and Rx of -1.00-3.00X 90, which is the correct base curve and power?**
- A. 41.00/44.00-1.00/-4.00
 - B. 42.00/45.00-1.00/-5.00
 - C. 44.00/41.00-3.00/-2.00
 - D. 44.00/42.00-1.00/-3.50
- 9. Keratoconus and penetrating keratoplasty fittings are best accomplished by which of the following methods?**
- A. Nomogram
 - B. Ks and Rx
 - C. Diagnostic fitting
 - D. Molded impression
- 10. How can one describe the lens shape of a spherical lens?**
- A. Flat
 - B. Uniform
 - C. Single curvature
 - D. Multi-focal

Answers

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

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Explanations

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1. What is a common side effect of antihistamines related to eye health?

- A. Increased ocular pressure
- B. Dry eyes**
- C. Redness of the eyes
- D. Increased tear production

Antihistamines are commonly used to treat allergy symptoms, but one of the notable side effects they can induce is dry eyes. This occurs because antihistamines can diminish the production of tears and reduce moisture in the eyes. The active ingredients in antihistamines often work by blocking the action of histamine, which can lead to the drying out of mucous membranes, including those in the eyes. Dry eyes can manifest as discomfort, irritation, and a feeling of grittiness, which are particularly problematic for contact lens wearers. It's essential for individuals taking antihistamines to be aware of this side effect, particularly if they already suffer from dry eye syndrome or other ocular surface disorders, as it can exacerbate these conditions. In contrast, options like increased ocular pressure, redness of the eyes, and increased tear production are generally not associated with antihistamines. Increased ocular pressure is often linked to glaucoma therapy side effects, while redness of the eyes can stem from a variety of other conditions or irritants but is not a typical effect of antihistamines. Increased tear production would suggest an opposite reaction to what antihistamines typically cause, reinforcing that dry eyes is indeed the correct and relevant side effect related to eye health.

2. Which condition is commonly associated with the aging process affecting lens flexibility?

- A. Myopia
- B. Astigmatism
- C. Presbyopia**
- D. Hyperopia

Presbyopia is a condition that typically affects individuals as they age, specifically in their 40s and beyond. This condition is characterized by a gradual loss of the eye's ability to focus on nearby objects, which results from the lens of the eye becoming less flexible. As we age, the lens hardens, making it difficult to change shape to focus on close-up tasks like reading or sewing. The decline in lens flexibility is a natural part of the aging process, leading to the development of presbyopia. In contrast, myopia (nearsightedness) affects the ability to see distant objects clearly and is primarily a refractive error rather than a result of aging. Astigmatism involves an irregular shape of the cornea or lens, leading to distorted vision, while hyperopia (farsightedness) occurs when distant objects are seen more clearly than nearby ones due to the way light is focused in the eye. Both myopia and hyperopia can be present from a young age and do not necessarily worsen solely as a result of the aging process.

3. What are the characteristics of corneal edema?

- A. Clear vision, reduced K readings
- B. Smoky vision, spectacle blur, increased K readings**
- C. Normal vision with light sensitivity
- D. Severe pain and redness in the eye

Corneal edema occurs when excess fluid accumulates in the cornea, leading to changes in its transparency and curvature. The characteristics associated with this condition include smoky or cloudy vision due to the swelling of corneal tissue, which interferes with the passage of light. As the cornea swells, it can also lead to an increase in keratometric (K) readings, reflecting the change in curvature caused by the fluid retention. This increased curvature happens because the cornea becomes more dome-shaped as it swells. The characteristic symptoms of corneal edema manifest not only as visual disturbances like spectacle blur, which is the perception of distorted images while wearing corrective lenses, but also as noticeable changes in the corneal shape that can be detected through keratometry. In contrast, other options present details that do not align with the known characteristics of corneal edema. For instance, clear vision with reduced K readings or normal vision with light sensitivity does not accurately describe the effects of corneal swelling. Severe pain and redness are more indicative of other ocular conditions such as infection or inflammation rather than corneal edema, which is primarily associated with vision changes.

4. What is the acceptable tolerance for overall lens diameter according to ANSI standards?

- A. ± 0.10 mm
- B. ± 0.05 mm**
- C. ± 0.15 mm
- D. ± 0.20 mm

According to ANSI (American National Standards Institute) standards, the acceptable tolerance for overall lens diameter is indeed ± 0.05 mm. This stringent tolerance is implemented to ensure consistency and accuracy in the manufacturing of contact lenses, which is crucial for both comfort and vision correction. The tight tolerance limits help to ensure that lenses fit properly on the eye, reducing the risk of complications such as discomfort or improper alignment. A deviation within this limits means that the lens can still function effectively and be comfortable for the wearer. Adhering to these specifications helps maintain quality control in lens production, which is vital for practitioners when selecting and prescribing contact lenses to patients. In contrast, wider tolerances would potentially allow for more significant disparities in lens measurements, which could lead to issues such as improper fit and decreased visual acuity. Therefore, the ± 0.05 mm standard represents the industry's commitment to precision in optical health products.

5. What characteristic is vital for the healing process after radial keratoplasty?

- A. Use of antibiotics
- B. Follow-up lens fitting
- C. Central to host-graft interface**
- D. Patient's age

The characteristic that is vital for the healing process after radial keratoplasty is the central host-graft interface. This area is crucial because it represents the junction between the corneal tissue of the host and the graft tissue that has been transplanted. The success of the procedure largely depends on how well these two tissues integrate and heal together. Proper healing at this interface can influence visual outcomes and the overall success of the graft, as it needs to maintain stability and transparency to restore optimal vision. Other factors such as the use of antibiotics are important for preventing infection, while follow-up lens fitting can assist in vision correction post-surgery. However, these factors do not directly address the fundamental biological process of healing at the site of the graft, which is why the host-graft interface is considered vital in the healing process. Age may influence healing rates, but it is not as directly critical to the success of the graft integration as the interface itself.

6. A warped lens will show how many base curves on the radiuscope and what type of power on the lensometer?

- A. One/spherical
- B. Two/sphero-cylindrical
- C. One/sphero-cylindrical
- D. Two/spherical**

A warped lens, when assessed with a radiuscope, will typically display two base curves because the warping creates irregularities in the lens shape. The radiuscope measures the curvature of the lens, and a warped lens reflects variations in curvature that can result in two distinct measurements. When using a lensometer on a warped lens, it usually exhibits spherical power rather than sphero-cylindrical power. Spherical power indicates that the lens has a uniform curvature across the entirety of its surface, which may appear due to the overall effect of the warp rather than the distinct correction of astigmatism typically identified with a sphero-cylindrical measurement. In summary, when a lens shows two base curves, it indicates irregular shapes due to warping, while the manifestation of spherical power suggests a simpler, more uniform characteristic despite the irregularities. Thus, the combination of two base curves and spherical power accurately describes the characteristics of a warped lens as assessed by both tools.

7. A soft contact lens that is too loose may show all of the following except?

- A. Edge stand off
- B. Limbal compression**
- C. Excessive lens movement
- D. Distorted retinoscopy directly after blinking

A soft contact lens that is too loose typically exhibits symptoms that indicate improper fitting, such as excessive lens movement and edge stand-off. When a lens is loose, it often can shift more than it should on the surface of the eye, leading to noticeable movement with blinking. Edge stand-off refers to the lens not conforming closely to the cornea at the edges, which can be observed during fitting assessments. However, limbal compression is a condition that generally occurs when a lens is too tight rather than too loose. It happens when the lens exerts too much pressure on the limbus (the border between the cornea and sclera), causing visible indentation or compression. Therefore, if a lens is loose, it would not create a situation where limbal compression is present. This understanding helps distinguish between the characteristics of loose versus tight-fitting contact lenses. Distorted retinoscopy due to a loose lens may occur temporarily as the lens displaces upon blinking, but it doesn't imply a consistent issue that would indicate improper fitting as seen with edge stand-off and excessive movement. Thus, knowing these characteristics allows practitioners to assess and diagnose fitting problems effectively, ensuring appropriate lens selection for patients.

8. Based on K readings of 44.00 at 180/41.00 at 90 and Rx of -1.00-3.00X 90, which is the correct base curve and power?

- A. 41.00/44.00-1.00/-4.00**
- B. 42.00/45.00-1.00/-5.00
- C. 44.00/41.00-3.00/-2.00
- D. 44.00/42.00-1.00/-3.50

To determine the correct base curve and power based on the provided K readings and prescription, we start with the K readings of 44.00 at 180 and 41.00 at 90. These measurements represent the corneal curvature, with the first value (44.00) likely corresponding to the flatter meridian and the second value (41.00) to the steeper meridian. The prescription given is -1.00-3.00X 90, which indicates that the patient has a spherical equivalent of -1.00 and an astigmatic component of -3.00 at an axis of 90 degrees. When fitting contact lenses, it's important to choose base curves that accommodate the K readings, with a preference toward mimicking the corneal curvature to enhance fitting and comfort. In the correct choice, the base curves are 41.00 and 44.00, which align closely with the K readings. The higher base curve (44.00) corresponds to the flatter curvature measurement, and the lower base curve (41.00) fits the steeper curvature. This alignment allows for a stable fit on the cornea while providing the necessary visual correction. Looking at the power component, the selection of

9. Keratoconus and penetrating keratoplasty fittings are best accomplished by which of the following methods?

- A. Nomogram
- B. Ks and Rx
- C. Diagnostic fitting**
- D. Molded impression

Diagnostic fitting is the preferred method for keratoconus and penetrating keratoplasty fittings due to its ability to provide a highly individualized assessment of the patient's eye shape and refractive needs. This method involves using trial lenses to evaluate fit and comfort in real-time, allowing practitioners to make necessary adjustments based on the unique corneal topography and the individual's response to the lenses. In cases of keratoconus, the cornea is often irregularly shaped, which can complicate lens fitting. By employing a diagnostic fitting approach, practitioners can assess how different lens designs perform on the actual eye, thereby selecting the most appropriate lenses—whether they be rigid gas permeable (RGP) or scleral lenses—that will offer the best vision correction and comfort for the patient. Although other methods may provide some degree of guidance, they do not offer the same level of precision and adaptability. For instance, using nomograms (a mathematical model for estimating lens parameters) may not account for the unique variations found in each patient's cornea. Relying solely on keratometry readings (Ks) and the prescription (Rx) might overlook critical fitting aspects, and molded impressions, while useful in some contexts, do not provide the dynamic feedback necessary for optimizing fit in cases

10. How can one describe the lens shape of a spherical lens?

- A. Flat
- B. Uniform
- C. Single curvature**
- D. Multi-focal

A spherical lens is characterized by having a uniform curvature that is consistent across its entire surface, which means that it has the same radius of curvature at every point. This property leads to a shape where all lines drawn from the center of the lens to the edge are equal in curvature. The term "single curvature" effectively encapsulates this feature, as it indicates that the lens surface curves uniformly in one direction, in contrast to other shapes like toroidal or aspheric lenses which have varying curvature. In contrast, while the lens may be described as "flat," this does not adequately capture the essential nature of a spherical lens. Furthermore, "uniform" might suggest a lack of distinction in curvature but doesn't specify the defining characteristic of a singular curvature that defines spherical lenses. Lastly, "multi-focal" refers to lenses designed to correct for multiple vision conditions, such as presbyopia, which typically includes different zones for seeing at different distances. This is a distinctive characteristic that does not describe the fundamental shape of a spherical lens.

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:

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

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