

NCLE Basic Certification Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

Copyright © 2025 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain from reliable sources accurate, complete, and timely information about this product.

SAMPLE

Questions

SAMPLE

- 1. What is the primary source of oxygen that the cornea receives?**
 - A. Gaseous exchange with the tear film**
 - B. Through blood vessels**
 - C. From the aqueous humor**
 - D. From the eyelid**
- 2. What is the purpose of a wetting solution in contact lenses?**
 - A. To make a lens more opaque**
 - B. To create a hydrophilic lens surface**
 - C. To strengthen the lens material**
 - D. To prevent lens discoloration**
- 3. What type of illumination is mainly used to detect corneal edema?**
 - A. Sclerotic Scatter**
 - B. Conical Beam**
 - C. Parallelepiped**
 - D. Indirect**
- 4. Which type of illumination uses reflected light to observe a portion of the eye?**
 - A. Direct illumination**
 - B. Diffuse illumination**
 - C. Indirect illumination**
 - D. Contrast illumination**
- 5. What does the BUT (break up time) test assess?**
 - A. Tear quantity**
 - B. Tear quality**
 - C. Lid function**
 - D. Corneal integrity**

- 6. In which meridian will a spherical RGP lens touch if fitted to a patient with high oblique astigmatism?**
- A. Vertical meridian**
 - B. Horizontal meridian**
 - C. Diagonal meridian**
 - D. Apex of the cornea**
- 7. Which of the following indicates a tight lens fit?**
- A. Minimal discomfort**
 - B. Excessive lens movement**
 - C. Distorted keratometer mires**
 - D. Unchanging vision after prolonged wear**
- 8. What type of astigmatism is the Front Toric lens specifically used to address?**
- A. More than 1 diopter corneal astigmatism**
 - B. Minimal corneal astigmatism**
 - C. More than 2 diopters lenticular astigmatism**
 - D. High corneal astigmatism**
- 9. What type of lens adheres to the globe more effectively than other soft lens materials?**
- A. Hydrogel lens**
 - B. Silicone hydrogel lens**
 - C. Hard gas permeable lens**
 - D. Non-wetting lens**
- 10. If an RGP is fitted too tightly, which adjustment is recommended?**
- A. Change the power of the lens**
 - B. Alter the base curve by 1mm**
 - C. Modify the diameter by 1mm**
 - D. Switch to a softer material**

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. What is the primary source of oxygen that the cornea receives?

A. Gaseous exchange with the tear film

B. Through blood vessels

C. From the aqueous humor

D. From the eyelid

The primary source of oxygen for the cornea comes from gaseous exchange with the tear film. The cornea is avascular, meaning it lacks blood vessels, which typically supply oxygen to other tissues in the body. Instead, it relies on oxygen dissolved in the tear film that sits on the surface. The tear film acts as a reservoir, allowing oxygen from the surrounding air to diffuse directly into the cornea. Additionally, while the aqueous humor provides some nutrients and helps maintain corneal hydration, it is not the main source of oxygen. Similarly, the eyelids play a role in protecting the cornea and helping to maintain moisture but do not directly deliver oxygen to the corneal tissue. Therefore, the gaseous exchange with the tear film is essential for maintaining the health and transparency of the cornea, making it the correct answer.

2. What is the purpose of a wetting solution in contact lenses?

A. To make a lens more opaque

B. To create a hydrophilic lens surface

C. To strengthen the lens material

D. To prevent lens discoloration

The purpose of a wetting solution in contact lenses is to create a hydrophilic lens surface. This hydrophilic property enhances the lens's ability to retain moisture, making it more comfortable for the wearer. A surface that is hydrophilic will attract water, which helps prevent dryness and maintains optimal hydration for the lens, contributing to overall comfort and visual clarity during wear. Additionally, a well-hydrated lens surface can help reduce deposits that may otherwise accumulate on the lens, further enhancing comfort and maintaining clear vision. While the other options may relate to lenses in some capacity, they do not accurately describe the primary function of a wetting solution, which is to enhance surface wettability and comfort for the wearer.

3. What type of illumination is mainly used to detect corneal edema?

A. Sclerotic Scatter

B. Conical Beam

C. Parallelepiped

D. Indirect

Sclerotic scatter is a specific type of illumination technique used in slit lamp examination that is particularly effective for observing corneal edema. This method takes advantage of the way light interacts with the cornea. When the cornea is edematous, its refractive properties change due to the accumulation of fluid, causing light to scatter in a manner that highlights these areas. In sclerotic scatter, a narrow beam of light is directed at the limbus (the border between the cornea and the sclera). The light penetrates the cornea at an angle, and because of the changes in refractive index caused by edema, some of the light is reflected back into the observer's view. This results in a distinct halo effect around the cornea, making it easier to identify areas of swelling and assess the extent of corneal edema. The technique allows for a clear visualization of corneal morphology and pathology. Other illumination types, such as the conical beam or parallelepiped, serve different purposes. The conical beam can be useful for examining the depth of structures but is not specifically designed to highlight corneal edema. The parallelepiped provides a wider view of the cornea but may not effectively illuminate the subtle changes associated with edema. Ind

4. Which type of illumination uses reflected light to observe a portion of the eye?

A. Direct illumination

B. Diffuse illumination

C. Indirect illumination

D. Contrast illumination

Indirect illumination is the correct choice because it involves using a beam of light that is reflected off a surface to illuminate a specific area of the eye. This technique allows the practitioner to observe structures that may be difficult to see with direct light and provides a clearer view of the eye's anatomy by utilizing the light that bounces off different surfaces. In practice, indirect illumination typically involves using a light source at an angle, which helps to create a shadow effect that enhances the visibility of the structures within the eye. This method is particularly useful when examining the retina or other inner ocular features because it minimizes glare and maximizes contrast, making it easier to detect abnormalities. Understanding this technique and its application is essential for eye care professionals, as it enables them to provide accurate assessments of a patient's eye health.

5. What does the BUT (break up time) test assess?

- A. Tear quantity
- B. Tear quality**
- C. Lid function
- D. Corneal integrity

The BUT, or Break-up Time test, is specifically designed to assess tear quality. This test measures the stability of the tear film on the surface of the eye. During the test, a small amount of fluorescein dye is introduced into the eye, and the time it takes for dry spots to appear on the cornea after a blink is recorded. A shorter BUT indicates an unstable tear film and suggests poor tear quality, which can lead to dry eye symptoms and other ocular surface issues. Other options relate to different aspects of tear or eye function. While assessing tear quantity would focus on the volume of tears produced, and lid function would involve the effectiveness of blinking, corneal integrity pertains to the health and structure of the cornea itself. The BUT specifically targets the quality of the tear film, which is crucial for maintaining comfort and protecting the ocular surface.

6. In which meridian will a spherical RGP lens touch if fitted to a patient with high oblique astigmatism?

- A. Vertical meridian
- B. Horizontal meridian
- C. Diagonal meridian**
- D. Apex of the cornea

A patient with high oblique astigmatism has a corneal curvature that causes the light to refract differently based on the axis of the astigmatism. In this condition, the steep and flat meridians of the cornea might not align with the standard horizontal and vertical alignment. When fitting a spherical rigid gas permeable (RGP) lens, the lens is designed to address the refractive errors of the eye. In cases of high oblique astigmatism, the RGP lens typically aligns itself along the axis where the cornea is steep and makes contact primarily in a diagonal meridian. This ensures that the lens can correct the visual acuity by providing a proper refractive surface over the cornea that corresponds effectively with the varying curvatures present. Touching along the diagonal meridian is crucial, as it accommodates the uneven steepness of the cornea and provides the appropriate correction needed for the patient. This alignment helps maintain adequate lens stability and optimal visual performance, making it the preferable outcome in these cases.

7. Which of the following indicates a tight lens fit?

- A. Minimal discomfort**
- B. Excessive lens movement**
- C. Distorted keratometer mires**
- D. Unchanging vision after prolonged wear**

A tight lens fit is characterized by restricted movement of the lens on the eye, which can lead to distorted keratometer mires. When the fit of a contact lens is too tight, it does not allow for proper tears to circulate between the lens and the cornea, which is essential for maintaining corneal health and comfort. This tightness can result in keratometry readings showing distortion, as the lens may not align correctly with the curvature of the cornea, leading to improperly shaped mires that appear skewed or altered. Notably, the other options do not indicate a tight lens fit. Minimal discomfort typically suggests that the lens is fitting well or is comfortably positioned on the eye. Excessive lens movement would indicate a loose fit, where the lens shifts too much during blinking or eye movement. Unchanging vision after prolonged wear can occur for various reasons, but does not specifically indicate a tight lens fit; it may happen with a well-fitted lens that maintains its optical properties effectively.

8. What type of astigmatism is the Front Toric lens specifically used to address?

- A. More than 1 diopter corneal astigmatism**
- B. Minimal corneal astigmatism**
- C. More than 2 diopters lenticular astigmatism**
- D. High corneal astigmatism**

The Front Toric lens is designed to address minimal corneal astigmatism effectively. These lenses help correct astigmatism by bending light in a way that compensates for the uneven curvature of the cornea. When a patient has minimal astigmatism, typically defined as less than 1 diopter, the use of a Front Toric lens can improve visual acuity without over-correcting or causing distortion, ultimately providing comfort and clarity. In the context of astigmatism correction, addressing minimal corneal astigmatism ensures that patients experience enhanced vision without the complications that may arise from using toric lenses designed for higher levels of astigmatism. Other options refer to higher degrees of corneal or lenticular astigmatism, which could require different types of toric lenses or more complex solutions than those provided by the Front Toric lens.

9. What type of lens adheres to the globe more effectively than other soft lens materials?

- A. Hydrogel lens**
- B. Silicone hydrogel lens**
- C. Hard gas permeable lens**
- D. Non-wetting lens**

Silicone hydrogel lenses are recognized for their superior adherence to the ocular surface, primarily due to their increased water content and enhanced oxygen permeability compared to traditional hydrogel lenses. The molecular structure of silicone hydrogel materials allows for a higher degree of wettability, reducing the risk of deposit formation and improving comfort for wearers. This characteristic makes silicone hydrogel lenses not only more effective in adhering to the globe but also more suitable for extended wear. Hydrogel lenses, while comfortable and widely used, do not share the same level of oxygen permeability, limiting their overall wear time compared to silicone hydrogels. Hard gas permeable lenses, although they provide excellent visual acuity and oxygen transmission, do not adhere to the eye in the same way that soft lenses do, leading to a different wearing experience. Non-wetting lenses may have specific characteristics that prevent the buildup of deposits, but they do not necessarily adhere better to the corneal surface than silicone hydrogel lenses. Therefore, in terms of overall adherence and comfort, silicone hydrogel lenses are the optimal choice.

10. If an RGP is fitted too tightly, which adjustment is recommended?

- A. Change the power of the lens**
- B. Alter the base curve by 1mm**
- C. Modify the diameter by 1mm**
- D. Switch to a softer material**

When a rigid gas permeable (RGP) lens is fitted too tightly, modifying the diameter by 1mm is a recommended adjustment to alleviate the tightness. A lens that is too snug may restrict proper movement and may lead to discomfort for the wearer. Increasing the diameter allows for more edge lift, which can improve lubrication under the lens and enhance overall comfort. While altering the base curve or changing the lens power can also be options for adjustments depending on specific fitting issues, they generally address different concerns. For example, changing the power alters vision correction without necessarily addressing the fit. Similarly, altering the base curve primarily affects how the lens conforms to the cornea's shape, but if the lens is overly tight in diameter, adjusting the diameter directly targets the fitting issue. Switching to a softer material might provide a different feel but does not immediately solve the fit issue of a lens that is currently too tight.