Contact Lens Registry Examination (CLRE) Practice (Sample)

Study Guide

Everything you need from our exam experts!

Questions

1. Leonardo DaVinci's concept of neutralizing the cornea included the use of what substance?

A. Small brown glass discs

B. Shaved materials

C. Oil

D. Water

2. What is the typical diameter of the corneal cap?

A. 3-4 mm

B. 7-8 mm

C. 7-9 mm

D. 4-5 mm

3. What is the total diameter of a bicurve lens with an 8.5 mm base curve and a 1.2 mm peripheral curve?

A. A. 9.7 mm

B. B. 10.9 mm

C. C. 8.5 mm

D. D. 11 mm

4. What is another term for the white part of the eye?

A. Conjunctiva

B. Eggshell

C. Tapetum

D. Sclera

5. As sagittal depth increases, what happens to vaulting?

A. Vaulting stays the same

B. Vaulting decreases

C. Vaulting increases

D. We do not know enough information

6. What should all eyecare professionals be familiar with in relation to federal laws and regulations?

A. Read by all patients

B. Familiar to all eyecare professionals

C. Read daily

D. Ignore if they do not make sense

7. Which Base Curve is classified as the flattest?

A. 45.75

B. 8.8

C. 44.00

D. 8.6

8. What is the effect of increasing the diameter of a contact lens?

A. Looser fit

B. Too much material

C. Tighter fit

D. No effect

9. How many transitional zones does a quadcurve lens typically have?

A. 4

B. 1

C. 3

D. 2

10. What is a possible reason that a teenager may want contact lenses?

A. To wear with eyeglasses when driving

B. To only use with sunglasses

C. To permanently change the eye color

D. To be better able to participate in certain sports

Answers

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

Explanations

1. Leonardo DaVinci's concept of neutralizing the cornea included the use of what substance?

A. Small brown glass discs

B. Shaved materials

C. Oil

D. Water

Leonardo DaVinci's concept of neutralizing the cornea involved the use of water. He envisioned that a lens could be formed by filling a cavity containing water, which would allow for the manipulation of light as it passed through, thus neutralizing the cornea's optical effects. This idea was a precursor to modern contact lenses, as DaVinci anticipated that a fluid-filled structure could aid in vision correction. Water, being a transparent and refractive medium, was theorized to alter how light interacted with the eye, providing a foundation for visual clarity. This approach highlights DaVinci's innovative thinking about optics and his early exploration of the principles that would eventually lead to the development of corrective lenses and contact lenses.

2. What is the typical diameter of the corneal cap?

A. 3-4 mm

B. 7-8 mm

C. 7-9 mm

D. 4-5 mm

The typical diameter of the corneal cap is around 7 to 9 mm. The corneal cap refers to the central portion of the cornea that is often involved in various contact lens fitting techniques and corneal surgeries, such as cross-linking or keratoplasty. This measurement is essential for practitioners to understand, as it greatly influences contact lens fitting, ensuring that the lenses align properly with the patient's corneal surface to achieve comfort and optimal vision. While other choices may present numbers within a range that could theoretically apply to certain clinical situations, the accepted and standard measurement for the corneal cap in practice falls within the 7-9 mm range. Understanding the correct measurements will aid in providing better patient care and effective fitting of contact lenses.

3. What is the total diameter of a bicurve lens with an 8.5 mm base curve and a 1.2 mm peripheral curve?

A. A. 9.7 mm

B. B. 10.9 mm

C. C. 8.5 mm

D. D. 11 mm

To determine the total diameter of a bicurve lens, you add the measurements of the base curve and the peripheral curve. The base curve, which in this case is 8.5 mm, forms the central part of the lens, while the peripheral curve, at 1.2 mm, represents an additional portion that will extend outward from the base curve. When calculating the total diameter, it is essential to consider that the diameter is a total measurement across the widest part of the lens. In this instance, the calculation involves adding the base curve and the peripheral curve directly to each other: 8.5 mm (base curve) + 1.2 mm (peripheral curve) = 9.7 mm. However, for a bicurve lens, this adds additional width to each side of the lens. Thus, the full diameter is 8.5 mm + 1.2 mm + 1.2 mm (to account for both sides of the lens). This results in a total diameter of 11 mm. Therefore, the correct choice reflects this measurement. Understanding this principle is crucial for lens fitting as it helps practitioners determine appropriate lens sizes based on the curvature and overall design of the lens.

4. What is another term for the white part of the eye?

A. Conjunctiva

B. Eggshell

C. Tapetum

D. Sclera

The term that describes the white part of the eye is the sclera. The sclera is a tough, protective outer layer that surrounds the eyeball, giving it shape and structure. It serves as an anchor for the eye muscles, enabling eye movement. Additionally, it provides a barrier against external elements, contributing to the overall health and protection of the inner eye components. Understanding the role of the sclera is crucial, especially in the context of eye health and diseases. If the sclera becomes discolored or shows any signs of abnormality, it can indicate underlying health issues that may need attention. Recognizing the sclera's importance in both anatomy and function underlines the significance of this term in discussions about eye care and contact lens fitting.

5. As sagittal depth increases, what happens to vaulting?

A. Vaulting stays the same

B. Vaulting decreases

C. Vaulting increases

D. We do not know enough information

As sagittal depth increases, vaulting increases. Sagittal depth refers to the total height of the corneal curvature from a reference plane, typically when fitting contact lenses. When the sagittal depth of a lens increases, it means that the central portion of the lens is elevated more from the surface of the eye, thereby creating a greater vault. This increase in vaulting is particularly relevant in soft lens fitting where the lens needs to clear the central cornea to avoid contact with the eye and to comfortably fit over the contours of the cornea. If the sagittal depth of the lens is greater, the distance between the back surface of the lens and the cornea increases, hence resulting in more vault. Understanding this relationship is essential for ensuring optimal lens fit and comfort, as well as for maintaining healthy corneal physiology. Too much vault can cause excessive movement and discomfort, while too little vault can lead to corneal staining or irritation. Therefore, the effect of increasing sagittal depth on vaulting is a key concept in lens fitting practices.

6. What should all eyecare professionals be familiar with in relation to federal laws and regulations?

A. Read by all patients

B. Familiar to all eyecare professionals

C. Read daily

D. Ignore if they do not make sense

Eyecare professionals must be familiar with federal laws and regulations because these rules govern the practice of optometry and the fitting and dispensing of contact lenses. Compliance with these laws is essential for ensuring patient safety, protecting patient rights, and maintaining the integrity of the healthcare system. This familiarity aids professionals in making informed decisions, adhering to legal requirements, and providing the best possible care to their patients. Understanding these regulations also helps professionals keep up with changes that might affect their practice standards and patient interactions. Furthermore, it includes knowledge of important components such as the Health Insurance Portability and Accountability Act (HIPAA) for patient privacy and the Food and Drug Administration (FDA) guidelines for medical devices, including contact lenses. Overall, this knowledge is critical for maintaining a professional and legally compliant practice.

7. Which Base Curve is classified as the flattest?

A. 45.75

B. 8.8

C. 44.00

D. 8.6

To identify which base curve is classified as the flattest, it's essential to understand the measurement system used for base curves in contact lenses. Base curves can be expressed in millimeters or in a numerical format, usually representing the curvature of the lens. When examining the values, a lower numerical value indicates a flatter curvature. In this context, the “8.6” and “8.8” refer to base curves measured in millimeters. A base curve of 8.6 millimeters presents a flatter profile compared to an 8.8 millimeter base curve. In contrast, when considering the other values mentioned (45.75 and 44.00), which are presumably also indicating curvature, a minimum value reflects a lower curvature number, as larger numerical values such as 45.75 or 44.00 imply a more curved lens, which is not flat. Hence, the base curve classified as the flattest, with the smallest numerical value in curvature, is indeed “8.6.” This distinction is crucial for ensuring proper fitting and comfort in contact lenses, as the curvature impacts how the lens sits on the cornea and the overall visual experience for the wearer.

8. What is the effect of increasing the diameter of a contact lens?

A. Looser fit

B. Too much material

C. Tighter fit

D. No effect

Increasing the diameter of a contact lens generally results in a tighter fit. This is because larger lenses cover more of the corneal surface and can fit more snugly against the eye. A larger diameter can help in distributing the lens pressure more evenly across the cornea, which may enhance comfort and stability during wear. However, it can also lead to a fit that is too tight in some cases, especially if the curvature does not match the contour of the eye well. The size of the lens is critical in ensuring that it adheres well to the eye while still being comfortable. It is essential for practitioners to assess how well the lens fits after changes are made to its diameter to maintain both comfort and health.

9. How many transitional zones does a quadcurve lens typically have?

A. 4

B. 1

C. 3

D. 2

A quadcurve lens is specifically designed with multiple curvatures to optimize fit and comfort on the ocular surface. The term "quadcurve" itself indicates that the lens features four separate radii of curvature, which are utilized to accommodate the natural contour of the eye and to provide a more effective distribution of pressure across the corneal surface. In the context of transitional zones, these areas allow the lens to smoothly connect different optical zones, facilitating proper movement and vision correction while maintaining lens stability. Typically, a quadcurve lens will have three transitional zones. These transitional zones permit gradual shifts between the various curvatures, enhancing fit and minimizing lid interaction. Understanding this structure is essential as it relates to the lens's performance and wearability for contact lens users. The overall design enhances comfort and maintains visual acuity, which is critical for the successful prescription of contact lenses.

10. What is a possible reason that a teenager may want contact lenses?

A. To wear with eyeglasses when driving

B. To only use with sunglasses

C. To permanently change the eye color

D. To be better able to participate in certain sports

A teenager may want contact lenses primarily to enhance their ability to participate in certain sports. This often stems from the fact that contacts provide a wider field of vision and are less likely to impede physical activity compared to eyeglasses, which can be cumbersome and may shift or fall off during play. Contacts also minimize the risk of injury that can arise from glasses during sports that involve physical contact or rapid movements. As a result, they offer practical benefits that can significantly improve performance and comfort in various athletic activities. In contrast, the other options focus on scenarios that either do not fully represent the primary benefits of contact lenses or are limited in context—for example, using contacts solely with sunglasses or wearing them while driving with eyeglasses does not capture the key motivations behind a teenager's desire for contacts. Additionally, while some may want to change their eye color, this is typically more about aesthetic preferences rather than the functional advantages that contact lenses provide in dynamic activities.