Certified Paraoptometric (CPO) Practice Exam 2025 (Sample)

Study Guide



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Questions



- 1. Which medical root refers to the iris?
 - A. Opt
 - B. Irid
 - C. Core
 - D. Blephar
- 2. What defines the retroscopic angle or tilt of a frame?
 - A. The angle between the frame and the forehead
 - B. The angle the frame front makes with the frontal plane
 - C. The distance between the frame and the eyes
 - D. The width of the frame at the temples
- 3. What is the term for the part of the eyewear frame that surrounds and holds the lenses in place?
 - A. Rim
 - **B.** Eyewire
 - C. Bridge
 - D. Grillamine
- 4. What type of lenses correct vision at three different distances, including intermediate?
 - A. Single vision lenses
 - **B.** Bifocal lenses
 - C. Trifocal lenses
 - D. Spherical lenses
- 5. What type of lens is made from materials that absorb water?
 - A. Rigid
 - B. Soft
 - C. Silicone hydrogel
 - D. Hard gas-permeable

- 6. What does "vertex distance" describe?
 - A. The distance from the front of the eyewear to the eye
 - B. The thickness of the lens at the edges
 - C. The distance from the back of the lens to the cornea
 - D. The space between the frame and the temple
- 7. Which visual condition is described as a result of uncontrolled eve movements?
 - A. Keratoconus
 - **B.** Nystagmus
 - C. Pinguecula
 - D. Ptygerium
- 8. What characteristic do cotton wool spots exhibit in retinal examination?
 - A. Small dark spots representing hemorrhage
 - B. White fluffy deposits indicating retinal ischemia
 - C. Areas of increased pigmentation in the retina
 - D. Cysts filled with fluid in the retinal layer
- 9. How would a spectacle prescription with measurements sphere +2.50, cylinder -1.75, and axis 172 be written?
 - $A. +2.50 -1.75 \times 172$
 - $B. -2.50 +1.75 \times 172$
 - $C. +1.75 -2.50 \times 172$
 - $D. -1.75 + 2.50 \times 172$
- 10. Which prefix means "beside, beyond, or around"?
 - A. Para-
 - B. Hypo-
 - C. Ex-
 - D. Retro-

Answers



- 1. B 2. B
- 3. B

- 4. C 5. B 6. C 7. B 8. B
- 9. A 10. A



Explanations



1. Which medical root refers to the iris?

- A. Opt
- **B.** Irid
- C. Core
- D. Blephar

The medical root that refers to the iris is indeed "Irid." This term originates from the Greek word "iris," which specifically denotes the colored part of the eye surrounding the pupil. In medical terminology, "Irid" is used in various contexts to describe conditions or procedures related to the iris, such as iridectomy (surgical removal of part of the iris) or iritis (inflammation of the iris). The other options relate to different parts of the eye or its functions. For instance, "Opt" is associated with vision or sight but does not specifically refer to the iris. The term "Core" pertains to the pupil, the opening in the center of the iris, rather than the iris itself. "Blephar" is connected to the eyelids, as in blepharitis, an inflammation of the eyelids. Hence, "Irid" is the correct choice related to the iris.

2. What defines the retroscopic angle or tilt of a frame?

- A. The angle between the frame and the forehead
- B. The angle the frame front makes with the frontal plane
- C. The distance between the frame and the eyes
- D. The width of the frame at the temples

The retroscopic angle, or tilt of a frame, is defined as the angle the frame front makes with the frontal plane. This angle is crucial for ensuring that the lenses are positioned correctly in front of the eyes, facilitating optimal visual performance and comfort for the wearer. When the frame is tilted back at this angle, it helps to reduce the incidence of light reflection off the lenses and can improve both aesthetic appearance and functional aspects of vision. In contrast, the other options do not accurately describe the retroscopic angle. The angle between the frame and the forehead refers to a different relationship that does not specifically define the tilt in relation to the frontal plane. The distance between the frame and the eyes pertains more to fitting adjustments and focal performance rather than the angle itself. The width at the temples relates to the frame's overall size and fit but is not related to the tilt or angle defined by the frame's position in relation to the frontal plane.

- 3. What is the term for the part of the eyewear frame that surrounds and holds the lenses in place?
 - A. Rim
 - **B.** Evewire
 - C. Bridge
 - D. Grillamine

The part of the eyewear frame that surrounds and holds the lenses in place is correctly referred to as the eyewire. The eyewire is a crucial component of the frame, as it secures the lens and ensures that it is properly positioned for optimal vision correction. This structure is designed to accommodate the lens shape and size, allowing for various styles of eyewear to be created while maintaining the functionality of holding the lenses securely. In contrast, the rim generally refers to the outer edge of the frame that can encompass the eyewire. The bridge is the part of the frame that sits on the nose, connecting the two lenses, but it does not hold the lenses in place. Grillamine, while it may sound relevant, is not a standard term associated with eyewear frame components and is not used to describe a part of an eyewear frame that holds lenses.

- 4. What type of lenses correct vision at three different distances, including intermediate?
 - A. Single vision lenses
 - **B.** Bifocal lenses
 - C. Trifocal lenses
 - D. Spherical lenses

The type of lenses that correct vision at three different distances, including intermediate distance, is trifocal lenses. Trifocal lenses are specifically designed to have three distinct optical zones to assist with vision at close range (for reading), intermediate distance (such as computer work), and distance vision (such as looking at objects far away). The use of trifocal lenses allows individuals to seamlessly transition between these various distances without needing to change glasses. In contrast, single vision lenses are designed for one specific distance, whether it be for near or distance vision. Bifocal lenses have only two segments—one for near and one for distance vision, without an intermediate zone. Spherical lenses refer to a specific type of lens shape rather than a progression of vision correction, and they can be single vision or multifocal, but do not specifically address three distances like trifocal lenses do.

5. What type of lens is made from materials that absorb water?

- A. Rigid
- **B. Soft**
- C. Silicone hydrogel
- D. Hard gas-permeable

The correct choice, soft lenses, is made from materials that are designed to absorb water, which contributes to their comfort and flexibility. These lenses are typically constructed from hydrophilic polymers, which can contain a significant percentage of water. This water content is critical for providing a soft, pliable surface that closely resembles the natural shape and feel of the eye, allowing for improved oxygen transmission and comfort during wear. Soft lenses are advantageous for many wearers due to their ability to maintain hydration and adaptability to the curvature of the eye, which enhances their overall comfort compared to other types of lenses. The ability of these lenses to absorb water helps to create a smooth optical surface that can minimize irritation and improve wearability. Other choices, such as rigid, silicone hydrogel, and hard gas-permeable lenses, do not absorb water the same way. Rigid lenses are typically made from harder materials that do not incorporate water, providing a different kind of visual correction. Silicone hydrogel lenses, while allowing for higher oxygen permeability and moisture retention, primarily do not absorb water like soft lenses do; they instead have water content that is a characteristic of their material but not due to the absorption process. Hard gas-permeable lenses are also designed to be rigid and do

6. What does "vertex distance" describe?

- A. The distance from the front of the eyewear to the eye
- B. The thickness of the lens at the edges
- C. The distance from the back of the lens to the cornea
- D. The space between the frame and the temple

The term "vertex distance" specifically refers to the distance from the back of the lens to the cornea. This measurement is critical in optometry and eyewear fitting because it affects the effective power of the lenses being used. As the distance changes, it can impact how light is focused by the lens onto the retina, influencing the overall visual acuity experienced by the wearer. Understanding vertex distance is essential for ensuring that prescriptions are accurately filled and that patients receive lenses that provide optimum visual correction. In some cases, if the vertex distance is not accurately measured or maintained, it can lead to visual distortions or discomfort for the wearer. The other options deal with other aspects of eyewear and lens fitting, but they don't capture the specific meaning of "vertex distance."

7. Which visual condition is described as a result of uncontrolled eye movements?

- A. Keratoconus
- **B.** Nystagmus
- C. Pinguecula
- D. Ptygerium

The condition characterized by uncontrolled eye movements is nystagmus. This condition involves involuntary oscillations of the eyes, which can occur in various patterns and can affect visual acuity and depth perception. Nystagmus may be congenital or acquired and can result from neurological disorders, certain medications, or inner ear problems. Keratoconus is a condition that affects the cornea, causing it to thin and change its shape, which can lead to visual distortion, but it does not involve uncontrolled movements of the eyes. Pinguecula is a benign growth on the conjunctiva of the eye, typically due to UV exposure, and while it may cause irritation, it does not affect eye movement. Pterygium is similar to pinguecula but can grow onto the cornea, potentially affecting vision, yet it also does not involve eye movements. Thus, nystagmus is specifically linked to the phenomenon of uncontrolled eye movements, making it the correct choice for this question.

8. What characteristic do cotton wool spots exhibit in retinal examination?

- A. Small dark spots representing hemorrhage
- B. White fluffy deposits indicating retinal ischemia
- C. Areas of increased pigmentation in the retina
- D. Cysts filled with fluid in the retinal layer

Cotton wool spots are indeed characterized as white fluffy deposits observed during a retinal examination. These spots are indicative of retinal ischemia, which occurs when there is reduced blood flow to the retina. They represent localized areas of axoplasmic material that accumulate due to the obstruction of axoplasmic flow in the nerve fiber layer of the retina, often due to occlusion of pre-capillary arterioles. This phenomenon is significant because it points to underlying vascular conditions and can be associated with various systemic diseases like diabetes and hypertension. Recognizing cotton wool spots is essential for clinicians, as their presence can help signal more serious underlying health issues requiring further investigation.

- 9. How would a spectacle prescription with measurements sphere +2.50, cylinder -1.75, and axis 172 be written?
 - $A. +2.50 -1.75 \times 172$
 - $B. -2.50 +1.75 \times 172$
 - $C. +1.75 -2.50 \times 172$
 - $D. -1.75 +2.50 \times 172$

The spectacle prescription is typically written in a standard format that includes the sphere, cylinder, and axis. In this case, the sphere value is +2.50, indicating a plus lens required for hyperopia (farsightedness), and the cylinder value is -1.75, which represents the degree of astigmatism to be corrected. The axis of 172 specifies the orientation of the cylinder in degrees. For the correct format, the sphere measurement is listed first, followed by the cylinder measurement and the axis. The convention used for writing cylinder values includes the sign (positive or negative) before the actual number and the axis measurement follows with an "x". Therefore, the correct representation of the given prescription is +2.50 -1.75 x172, clearly indicating the positive sphere, the negative cylinder, and the axis of the cylinder. The other choices do not match the proper notation for writing a prescription, violating the established format. Hence, the given answer is correctly represented as A, affirming that this aligns with standard practices for documenting spectacle prescriptions.

- 10. Which prefix means "beside, beyond, or around"?
 - A. Para-
 - B. Hypo-
 - C. Ex-
 - D. Retro-

The prefix that means "beside, beyond, or around" is indeed "para-." This prefix is commonly used in various medical and scientific terms where it signifies a position that is adjacent to or surrounding something else. For example, "paranormal" refers to phenomena that are beyond the normal or scientific understanding, while "paralysis" implies a condition that affects the ability to move, usually indicating an issue alongside the nervous system. In contrast, the other prefixes provided have different meanings: "hypo-" generally denotes a lower or under condition, "ex-" means out of or from, and "retro-" refers to something that is backward or in the past. These distinctions highlight the unique connotation of "para-" as it relates specifically to positioning or proximity.