Certified Ophthalmic Assistant Practice Exam (Sample)

Study Guide

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Questions

1. Which of the following is NOT a function of the autorefractor?

A. Measure corneal curvature

B. Assess refractive error

C. Determine best-corrected visual acuity

D. Assist in contact lens fitting

2. How are the cones of the human eye categorized in terms of color sensitivity?

A. Yellow, cyan, magenta

B. Red, green, blue

C. Black, white, gray

D. Orange, purple, brown

3. What does the notation -2.50 +1.00 X175, in minus cylinder, equate to?

A. -2.00 -1.00 X 85

B. -1.50 -1.00 X 85

C. -2.50 +1.00 X 85

D. -2.00 -1.00 X 95

4. Which of the following steps does NOT contribute to creating an aseptic environment in the operating room?

A. Use of powdered gloves

B. Use of lint-free drapes

C. Rinsing of instruments after use with saline

D. Use of Milipore filters

5. What is the appropriate technique to assist visually impaired patients?

A. Direct them verbally

B. Place their hand on your arm at the elbow

C. Provide a magnifying glass

D. Use hand gestures

6. Degermation of the hands is known as

- **A. Antisepsis**
- **B. Rubbing**
- **C. Scrubbing**
- **D. Sterilization**

7. Which drug is a powerful mydriatic and cycloplegic that can take up to two weeks to wear off?

- **A. Atropine**
- **B. Cyclopentolate**
- **C. Homatropine**
- **D. Tropicamide**

8. What is the most widely used method of visual field screening that requires no special equipment?

- **A. Automated perimetry**
- **B. Confrontation testing**
- **C. Humphrey perimetry**
- **D. Schirmer test**

9. Retinoscopy is an example of what type of refractometry?

- **A. passive**
- **B. subjective**
- **C. active**
- **D. objective**

10. What test illuminates the screen with a red-green filter for evaluation?

- **A. Humphrey Visual Field test**
- **B. Color vision test**
- **C. Duochrome test**
- **D. Slit-lamp examination**

Answers

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

Explanations

1. Which of the following is NOT a function of the autorefractor?

A. Measure corneal curvature

B. Assess refractive error

C. Determine best-corrected visual acuity

D. Assist in contact lens fitting

The autorefractor is a device used to measure a patient's refractive error by analyzing the way light is focused on the retina. It can help in determining the power of lenses needed to correct refractive errors such as myopia (nearsightedness), hyperopia (farsightedness), and astigmatism. While the autorefractor is essential for assessing the refractive error, determining best-corrected visual acuity (BCVA) is not its primary function. The BCVA is typically evaluated by having the patient read an eye chart with different sizes of letters and is commonly done by using a phoropter or trial frame, not an autorefractor.

2. How are the cones of the human eye categorized in terms of color sensitivity?

A. Yellow, cyan, magenta

B. Red, green, blue

C. Black, white, gray

D. Orange, purple, brown

Cones in the human eye are categorized based on their color sensitivity into three types: red, green, and blue. These cones are responsible for our ability to perceive colors in the visible spectrum. Option A (Yellow, cyan, magenta), Option C (Black, white, gray), and Option D (Orange, purple, brown) do not accurately represent the categorization of cones in terms of color sensitivity in the human eye.

3. What does the notation -2.50 +1.00 X175, in minus cylinder, equate to?

A. -2.00 -1.00 X 85

B. -1.50 -1.00 X 85

C. -2.50 +1.00 X 85

D. -2.00 -1.00 X 95

The notation -2.50 +1.00 X175 describes a lens prescription using minus cylinder format. In this format, the first number indicates the spherical component of the lens prescription, the second number represents the cylinder component, and the angle provides the orientation of the cylinder. To convert -2.50 +1.00 X175 to the plus cylinder format, which is a common requirement for interpreting such prescriptions, a few steps need to be followed. The first step involves understanding that you need to change the angle by 90 degrees, which transforms the cylinder axis from 175 degrees to 85 degrees (175 - 90 = 85). Next, you adjust the sphere and cylinder accordingly. When moving from minus cylinder to plus cylinder, you increase the spherical value and decrease the cylindrical value. Therefore, -2.50 is increased by the value of the cylinder (+1.00), resulting in a new spherical value of -2.50 + 1.00 = -1.50. The cylinder component, being switched over from plus to minus, becomes -1.00. This gives the new notation of -1.50 -1.00 X85. The corresponding answer in the options reflects this conversion correctly. The

4. Which of the following steps does NOT contribute to creating an aseptic environment in the operating room?

A. Use of powdered gloves

B. Use of lint-free drapes

C. Rinsing of instruments after use with saline

D. Use of Milipore filters

Using powdered gloves does not contribute to creating an aseptic environment in the operating room. Powdered gloves can introduce particles and contaminants into the sterile field, increasing the risk of infection for the patient. Therefore, the use of powdered gloves is not recommended in the operating room to maintain the aseptic environment. On the other hand, options B, C, and D all contribute to creating an aseptic environment. The use of lint-free drapes helps prevent the introduction of contaminants, rinsing instruments after use with saline removes debris and helps maintain cleanliness, and Milipore filters are used to purify solutions and maintain sterility in the operating room.

5. What is the appropriate technique to assist visually impaired patients?

A. Direct them verbally

B. Place their hand on your arm at the elbow

C. Provide a magnifying glass

D. Use hand gestures

The appropriate technique to assist visually impaired patients involves placing their hand on your arm at the elbow, which is a common and effective method for guiding someone who has impaired vision. This approach allows the visually impaired individual to follow closely, gaining a sense of direction and movement that is more tangible. By holding onto the elbow, they can feel your movements and adjust accordingly, ensuring they feel secure and oriented in their environment. This technique also helps maintain the patient's independence while providing necessary assistance, as it allows them to navigate with their own pace and confidence. It establishes a physical connection that helps the patient understand when to turn or stop without needing constant verbal instructions, which might be confusing or overwhelming in certain situations. While directing them verbally can help provide information, it may not effectively guide them physically, and using hand gestures may not convey the necessary information to someone who cannot see. Similarly, while a magnifying glass could be useful for someone with low vision, it does not assist with navigation and orientation, which is critical for visually impaired individuals in unfamiliar settings.

6. Degermation of the hands is known as

A. Antisepsis

B. Rubbing

C. Scrubbing

D. Sterilization

Degermation of the hands is known as scrubbing. Scrubbing refers to the process of thoroughly washing the hands with soap and water to remove dirt, debris, and germs. This is a crucial step in infection control and hygiene practices, especially in healthcare settings where maintaining clean hands is essential to prevent the spread of infections. Antisepsis refers to the process of inhibiting or preventing the growth of microorganisms on living tissue. Rubbing, although a form of mechanical action, is not specific to the degermation of hands. Sterilization involves the complete destruction or elimination of all forms of microbial life, including spores, and is usually done on inanimate objects rather than hands.

7. Which drug is a powerful mydriatic and cycloplegic that can take up to two weeks to wear off?

A. Atropine

B. Cyclopentolate

C. Homatropine

D. Tropicamide

Atropine is a powerful mydriatic and cycloplegic drug that can take up to two weeks to wear off. It is commonly used for conditions such as uveitis, iritis, and amblyopia. Atropine works by dilating the pupil (mydriasis) and relaxing the ciliary muscle of the eye (cycloplegia), which temporarily paralyzes the ability of the eye to focus. This prolonged effect makes it particularly useful in certain eye conditions where long-lasting pupil dilation and cycloplegia are beneficial. The other options, Cyclopentolate, Homatropine, and Tropicamide, are also commonly used as mydriatics and cycloplegics in ophthalmic practice, but they do not have the same duration of action as Atropine. Cyclopentolate typically lasts around 6-24 hours, Homatropine lasts about 24-72 hours, and Tropicamide has a shorter duration of action, usually around 4-8 hours.

8. What is the most widely used method of visual field screening that requires no special equipment?

A. Automated perimetry

B. Confrontation testing

C. Humphrey perimetry

D. Schirmer test

Confrontation testing is the most widely used method of visual field screening that requires no special equipment. It involves comparing the patient's visual field to the examiner's visual field, usually by moving fingers or objects in various areas of the visual field. This method is quick, easy, and can be done in a variety of settings to provide a basic assessment of the patient's visual field. Automated perimetry (choice A) and Humphrey perimetry (choice C) are more advanced methods of visual field testing that require specialized equipment. Automated perimetry typically involves a machine that tests the patient's visual field using light stimuli, while Humphrey perimetry is a specific type of automated perimetry that is commonly used in clinical settings. The Schirmer test (choice D) is a test used to measure the production of tears and assess for dry eye syndrome, which is not related to visual field screening.

9. Retinoscopy is an example of what type of refractometry?

A. passive

B. subjective

C. active

D. objective

Retinoscopy is an example of objective refractometry. Objective refractometry techniques do not require any input or feedback from the patient, and the results are obtained solely based on the optical principles of the eye. In retinoscopy, the ophthalmic assistant uses a retinoscope to shine a light into the patient's eye and observes the reflex or movement of light within the eye to determine the refractive error. This method provides an objective measurement of the patient's refractive error without relying on the patient's responses. In contrast, subjective refractometry, which is not the case in retinoscopy, involves the patient's feedback and responses to determine the refractive error, making it a different approach from objective refractometry.

10. What test illuminates the screen with a red-green filter for evaluation?

A. Humphrey Visual Field test

B. Color vision test

C. Duochrome test

D. Slit-lamp examination

The test that illuminates the screen with a red-green filter for evaluation is the Duochrome test. This test is used to determine a patient's refractive error or assess the accuracy of a current glasses prescription. By using a red-green filter, the Duochrome test helps to neutralize any chromatic aberrations, making it easier to identify the correct refractive correction. Option A, the Humphrey Visual Field test, is used to assess a patient's visual field for any defects or abnormalities. Option B, the Color vision test, is used to evaluate a patient's ability to differentiate colors and is not specifically associated with a red-green filter. Option D, the Slit-lamp examination, is a test used to examine the anterior segment of the eye under high magnification and is not related to using a red-green filter on a screen.