# ABO Exam Practice Test – Free Study Guide & Optician Test Prep (2025) (Sample)

## Study Guide


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# Questions

**1. What is one major risk of diabetes related to eye health?**

**A. Increased risk of color blindness**

**B. Higher chance of developing cataracts**

**C. Improvement in night vision**

**D. Reduced need for corrective lenses**

**2. Which type of lens is specifically designed to assist with reading up close?**

**A. Progressive lens**

**B. Bifocal lens**

**C. Distance lens**

**D. Toric lens**

**3. What do we call a plus lens that, when moved from its primary position, results in a BU prism?**

**A. BI Prism**

**B. A lens that has been decentered**

**C. Press-On Prism**

**D. BU Prism**

**4. What training is typically required for someone to become an optician?**

**A. On-the-job training only**

**B. Completion of a specialized program or associate's degree**

**C. A medical degree with residency**

**D. No formal training is required**

**5. Which type of prescription has opposite sign conventions?**

**A. Hypermetropic Rx**

**B. Myopic Rx**

**C. Antimetropic Rx**

**D. Astigmatic Rx**

**6. What is not an element of the Prentice Rule formula?**

- **A. Radius of Curvature**
- **B. Refractive Index**
- **C. Power of the Lens**
- **D. Thickness of the Lens**

**7. Visual field tests aim to detect abnormalities related to:**

- **A. Color perception**
- **B. Peripheral vision and blind spots**
- **C. Depth perception**
- **D. Central visual acuity**

**8. What does the "Spherocylinder" indicate in a prescription?**

- **A. It measures only spherical power for nearsightedness**
- **B. It indicates the presence of both spherical and cylindrical corrections**
- **C. It is a measure of color blindness**
- **D. It specifies the axis for linear corrections**

**9. What are photochromic lenses best known for?**

- **A. Their ability to stay tinted indoors**
- **B. Their ability to darken in sunlight and return to clear indoors**
- **C. Their lightness compared to regular lenses**
- **D. Their scratch resistance**

**10. What is the function of Prentice's Rule?**

- **A. Calculate prismatic effect**
- **B. Characteristic of a minus lens**
- **C. Power times 0.5**
- **D. Measures vertex distance**

# Answers

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

# Explanations

## 1. What is one major risk of diabetes related to eye health?

**A. Increased risk of color blindness**

**B. Higher chance of developing cataracts**

**C. Improvement in night vision**

**D. Reduced need for corrective lenses**

**One significant risk of diabetes regarding eye health is the higher chance of developing cataracts. Diabetes can lead to changes in the lens of the eye by causing the accumulation of sorbitol and other substances, which can alter the lens's transparency and flexibility. Over time, the lens may become cloudy, resulting in cataracts, which can affect vision clarity and lead to difficulties in daily activities. Cataracts, especially in the context of diabetes, can develop more quickly or at a younger age compared to individuals without diabetes. It is crucial for individuals with diabetes to have regular eye examinations to monitor for cataract development and other potential eye complications, such as diabetic retinopathy and glaucoma. The other options do not align with the risks typically associated with diabetes; for example, while color blindness is a genetic condition and not directly caused by diabetes, improvements in night vision and reduced need for corrective lenses lack a scientific basis in the context of diabetes.**

## 2. Which type of lens is specifically designed to assist with reading up close?

**A. Progressive lens**

**B. Bifocal lens**

**C. Distance lens**

**D. Toric lens**

**The selection of bifocal lenses as the answer is appropriate because these lenses are specifically constructed to provide vision correction for two distinct viewing distances—one for distance vision and the other for near vision. The lower portion of a bifocal lens is typically designed with a prescription tailored for reading or close-up tasks, allowing individuals with presbyopia to read comfortably without needing to switch glasses. Progressive lenses, while also helpful for vision at multiple distances, offer a gradual transition between different focal zones and are not strictly limited to just reading; they cater to both near and distance vision more seamlessly. Distance lenses, on the other hand, are solely for correcting distance vision, leaving those with near vision problems such as presbyopia at a disadvantage. Lastly, toric lenses are specifically designed to correct astigmatism and are not focused on addressing near vision needs. Therefore, bifocal lenses are the best fit for the purpose of assisting with reading up close.**

## 3. What do we call a plus lens that, when moved from its primary position, results in a BU prism?

**A. BI Prism**

**B. A lens that has been decentered**

**C. Press-On Prism**

**D. BU Prism**

**A plus lens that, when moved from its primary position, creates a base-up (BU) prism effect is indeed described as a lens that has been decentered. When a lens is decentered, it means that it has been shifted away from its optical center. This misalignment causes light rays passing through the lens to bend in such a way that they exhibit prismatic effects—specifically, a base-up effect if the lens is a plus lens. Decentering in the context of a plus lens means that the optical center is no longer in line with the pupillary distance of the wearer. As a result, the light entering the lens does not pass through the optical center and instead creates a prism effect. In the case of a plus lens, decentering upwards will yield a base-up prism, which can be beneficial for certain conditions such as vertical imbalances or for aligning the visual axes of the eyes effectively. Other options do not appropriately describe this phenomenon. A base-in (BI) prism is the opposite of a base-up prism, and not directly related to the context of a plus lens. A press-on prism usually refers to a method of adding prism power to a lens rather than describing how the prism effect arises from lens positioning.**

## 4. What training is typically required for someone to become an optician?

**A. On-the-job training only**

**B. Completion of a specialized program or associate's degree**

**C. A medical degree with residency**

**D. No formal training is required**

**To become an optician, completion of a specialized program or associate's degree is commonly required as it provides the foundational knowledge and skills necessary for the role. These programs deliver education on optics, lens design, and fitting procedures, as well as the necessary technical skills for dispensing eyewear. By studying topics such as anatomy of the eye, refraction, and vision correction, aspiring opticians gain a deeper understanding of the principles that underpin optical care. Additionally, a structured educational program typically includes hands-on training components, which further enhance an optician's ability to effectively assist patients. Such formal training not only helps opticians stay compliant with industry standards but also improves their overall competency in providing quality eye care services.**

## 5. Which type of prescription has opposite sign conventions?

**A. Hypermetropic Rx**

**B. Myopic Rx**

**C. Antimetropic Rx**

**D. Astigmatic Rx**

**Prescriptions for hypermetropia and myopia have the same sign conventions, indicating whether the patient needs lenses to correct for farsightedness or nearsightedness. An antimetropic prescription, on the other hand, has opposite sign conventions and is used to correct for astigmatism, a condition where the eye has an irregular curvature causing blurred vision. An astigmatic prescription, while addressing a different issue, still follows the same sign conventions as hypermetropic and myopic prescriptions. Therefore, the correct answer is C Antimetropic Rx.**

## 6. What is not an element of the Prentice Rule formula?

**A. Radius of Curvature**

**B. Refractive Index**

**C. Power of the Lens**

**D. Thickness of the Lens**

**The Prentice Rule formula is used to calculate the induced prism in a lens. It includes the refractive index, power of the lens, and thickness of the lens. The radius of curvature is not an element of this formula and is not directly related to the calculation of prism. It is a separate measurement that is used to determine the shape of a lens and is not applicable in this context. Therefore, A is the correct answer as it is not part of the Prentice Rule formula.**

## 7. Visual field tests aim to detect abnormalities related to:

**A. Color perception**

**B. Peripheral vision and blind spots**

**C. Depth perception**

**D. Central visual acuity**

**Visual field tests are used to assess the extent of your peripheral vision, as well as any blind spots or areas of reduced vision. This is important because peripheral vision and blind spots can be indicative of certain eye conditions or diseases, such as glaucoma. While color perception, depth perception, and central visual acuity are all important aspects of vision, they are not specifically measured by visual field tests. Therefore, options A, C, and D are incorrect and not relevant to visual field tests.**

## 8. What does the "Spherocylinder" indicate in a prescription?

**A. It measures only spherical power for nearsightedness**

**B. It indicates the presence of both spherical and cylindrical corrections**

**C. It is a measure of color blindness**

**D. It specifies the axis for linear corrections**

**The term "Spherocylinder" in a prescription signifies the presence of both spherical and cylindrical corrections for vision. In this context, the spherical component addresses the overall nearsightedness or farsightedness, providing the basic lens power needed for clear vision. The cylindrical component comes into play to correct astigmatism, which is caused by an irregular shape of the eye that leads to blurred or distorted vision. When a prescription includes a spherocylinder measurement, it illustrates that the patient requires two types of corrections to achieve optimal visual acuity. This dual correction is essential because it addresses not only the direct refractive error (spherical) but also the additional astigmatic error (cylindrical), which is crucial for sharp, clear vision across different orientations. Understanding this distinction is vital, especially for opticians and eye care professionals, as it ensures that the lenses prescribed can effectively meet the visual needs of patients. Thus, the concept of spherocylinder is integral in comprehensive optical prescriptions and plays a significant role in vision correction strategies.**

## 9. What are photochromic lenses best known for?

**A. Their ability to stay tinted indoors**

**B. Their ability to darken in sunlight and return to clear indoors**

**C. Their lightness compared to regular lenses**

**D. Their scratch resistance**

**Photochromic lenses are best known for their ability to darken in sunlight and return to clear indoors. This unique characteristic allows them to adapt to changing light conditions, providing convenience for the wearer. When exposed to UV light from the sun, the lenses undergo a chemical reaction that causes them to darken, effectively blocking harmful rays and reducing glare. Once the wearer moves indoors, where UV light is limited, the lenses quickly transition back to their clear state, offering unobstructed vision without the need to switch between prescription glasses and sunglasses. While there are benefits associated with the other options, they do not define the primary function of photochromic lenses. For example, remaining tinted indoors is not a feature of photochromic lenses; instead, they are designed to clear up as the light changes. Although they can be lighter than some regular lenses, that is not their distinguishing feature. Scratch resistance can be a property of various lenses but does not specifically relate to the photochromic technology itself.**

## 10. What is the function of Prentice's Rule?

**A. Calculate prismatic effect**

**B. Characteristic of a minus lens**

**C. Power times 0.5**

**D. Measures vertex distance**

**Prentice's Rule is a mathematical formula used to calculate the prismatic effect, or the displacement of light, caused by lenses in eyewear. It takes into account the power of the lens and the distance between the optical center and the patient's pupil. This rule is used to determine the correct lens strength and placement to correct for conditions such as double vision. Options B, C, and D are incorrect as they do not relate to the function of Prentice's Rule. While a minus lens is a characteristic of Prentice's Rule, it is not the intended function. Option C is also incorrect as the formula does not include multiplying the power by 0.5. And finally, Prentice's Rule does not measure vertex distance, which is the distance from the back surface of the lens to the front surface of the eye.**