

NBEO BINOCULAR VISION PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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1. Which Morgan's norms triple corresponds to Near BO smooth vergences?
 - A. -----/7/4
 - B. 9/19/10
 - C. 13/21/13
 - D. 17/21/11
2. Which vergence range is reduced in fusional vergence dysfunction?
 - A. NFV Ranges
 - B. PFV Ranges
 - C. Both NFV and PFV Ranges
 - D. Normal Ranges
3. Which test is used to screen for strabismus by comparing red reflexes of the two eyes?
 - A. Hirschberg
 - B. Krimsky
 - C. Bagolini
 - D. Bruckner
4. What is the MOST likely cause of refractive amblyopia?
 - A. Isometropic hyperopia
 - B. Anisometropic hyperopia
 - C. Isometropic myopia
 - D. Anisometropic myopia
5. Severe amblyopia is classified based on which VA range?
 - A. 20/100 to 20/400
 - B. 20/20 to 20/60
 - C. 20/40 to 20/100
 - D. 20/80 to 20/160
6. What is it called when an esotrope develops temporal eccentric fixation?
 - A. Paradoxical eccentric fixation
 - B. Eccentric Viewing
 - C. Eccentric Fixation
 - D. Paradoxical fixation

7. Will a patient with Accommodative Insufficiency have a lag or lead of accommodation on MEM?
- A. Lag of Accommodation
 - B. Lead of Accommodation
 - C. Neutral
 - D. Varied
8. Which fixation disparity curve is seen in an eso deviation?
- A. Type 1
 - B. Type 2
 - C. Type 3
 - D. Type 4
9. What are the Morgan's norms for Near BO smooth vergences?
- A. -----/7/4
 - B. 9/19/10
 - C. 13/21/13
 - D. 17/21/11
10. Does the push-up test tend to overestimate or underestimate the amplitude of accommodation compared to other methods?
- A. Overestimate due to RDM
 - B. Underestimate
 - C. Equal
 - D. Not predictable

Answers

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

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Explanations

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1. Which Morgan's norms triple corresponds to Near BO smooth vergences?

- A. -----/7/4
- B. 9/19/10
- C. 13/21/13
- D. 17/21/11**

Morgan's norms give reference values for how the eyes should vergence at near in specific directions. For near base-out smooth vergences, the normative triplet describes how much convergence the eyes can produce before fusion is disrupted (the break point), how much convergence remains after re-establishing fusion (the recovery), and the overall near vergence capability in that direction. The pattern should show break greater than recovery, with a plausible total range. The triple 17/21/11 fits this: a break around 17 prism diopters, a recovery around 11 prism diopters, and an overall near BO range about 21 prism diopters. The other options either mix the values in a way that doesn't match the expected relationship (recovery greater than break) or omit a necessary component, so they don't align with Morgan's norms for near BO smooth vergences.

2. Which vergence range is reduced in fusional vergence dysfunction?

- A. NFV Ranges
- B. PFV Ranges
- C. Both NFV and PFV Ranges**
- D. Normal Ranges

Fusional vergence dysfunction involves a reduced ability to fuse images across a range of vergence demands, so both directions of fusional vergence are diminished. Positive fusional vergence is the convergence you use to overcome base-in demand, while negative fusional vergence is the divergence you use to overcome base-out demand. In this condition, the reserves for both convergence and divergence are limited, so fusion breaks with smaller prism values in either direction. Clinically, you'll see reduced PFV and reduced NFV amplitudes, leading to symptoms like asthenopia or headaches during near work even if basic alignment is within normal limits.

3. Which test is used to screen for strabismus by comparing red reflexes of the two eyes?

- A. Hirschberg
- B. Krimsky
- C. Bagolini
- D. Bruckner**

The main concept is using a simple red reflex comparison to screen for eye misalignment. In the Bruckner test, you shine a light from a direct ophthalmoscope or retinoscope at about half a meter and look at the red reflections from both retinas as the patient fixes on a distant target in a dim room. When the eyes are properly aligned, the red reflexes are similar in brightness and lie roughly in the same position within each pupil. If there is strabismus, the reflexes become asymmetric—one eye's reflex may appear brighter or darker, or the reflection may be displaced relative to the other pupil—flagging a potential misalignment. This makes it a quick, effective screening tool for strabismus and helps identify conditions like anisometropia or media differences that could affect the reflex. For context, other tests use different cues: the Hirschberg method estimates deviation by the location of the corneal light reflex relative to the pupil center; the Krimsky test uses prisms to neutralize the reflex and quantify the deviation; Bagolini assesses binocular function with overlapping light streaks to reveal suppression or diplopia. The Bruckner test specifically centers on comparing the red reflexes, which is why it's the best choice here.

4. What is the MOST likely cause of refractive amblyopia?

- A. Isometropic hyperopia
- B. Anisometropic hyperopia**
- C. Isometropic myopia
- D. Anisometropic myopia

Refractive amblyopia develops when one eye consistently presents a blurrier image during visual development, leading the brain to suppress that eye to avoid double vision. The strongest risk factor is anisometropia—a difference in refractive error between the eyes. When one eye is significantly more hyperopic than the other, that eye is blurrier at all distances and requires more accommodation; this persistent unequal image quality drives suppression of the blurrier eye and impairs its cortical development. That unilateral suppression is why anisometropic hyperopia is the most likely cause of refractive amblyopia. If both eyes were similarly misfocused (isometropia), you'd expect bilateral rather than unilateral reduced vision, and anisometropic myopia can cause amblyopia too, but the hyperopic difference is the most common scenario.

5. Severe amblyopia is classified based on which VA range?

- A. 20/100 to 20/400**
- B. 20/20 to 20/60
- C. 20/40 to 20/100
- D. 20/80 to 20/160

The level of visual acuity in the affected eye after correction tells you how severe the amblyopia is. When the amblyopic eye reads at about 20/100 up to 20/400, that indicates a substantial loss of vision, which is categorized as severe amblyopia. At 20/100, the patient sees much worse detail than normal for distance, and at 20/400 the detail that a person with normal vision could see at 400 feet is only clear at 20 feet, showing a deep reduction in acuity. This range is used clinically to distinguish severe amblyopia from milder forms and to inform treatment intensity and prognosis. Values better than 20/100 imply less severe impairment, while vision worse than 20/400 would indicate an even more profound deficit.

6. What is it called when an esotrope develops temporal eccentric fixation?

- A. Paradoxical eccentric fixation**
- B. Eccentric Viewing
- C. Eccentric Fixation
- D. Paradoxical fixation

Eccentric fixation in strabismus means using a nonfoveal point to fixate a target. When the eye is esotropic (turned inward), the brain often adopts fixation using the temporal retina of that eye. Fixating with the temporal retina places the fixation point on the outer side of the retina, which is a bit paradoxical given the inward turn of the eye. This specific situation is described as paradoxical eccentric fixation. Eccentric viewing is a broader term for any nonfoveal fixation, and eccentric fixation is the general phenomenon, but the phrase paradoxical eccentric fixation precisely captures the unusual, inward-turning eye using a temporal retinal point for fixation.

7. Will a patient with Accommodative Insufficiency have a lag or lead of accommodation on MEM?

- A. Lag of Accommodation**
- B. Lead of Accommodation
- C. Neutral
- D. Varied

Accommodative response during near viewing is what MEM is measuring: is the eye's adjustment matching the demand, lagging behind it, or overshooting it? In accommodative insufficiency, the eye doesn't fully meet the near demand, so the accommodative response falls short. On MEM, this shows up as a lag of accommodation—the reflex neutralizes with a plus lens, indicating you needed a bit more accommodation than the patient could provide. If there were a lead, the patient would be over-accommodating and the neutralization would occur with a minus lens. A neutral result would mean the response matched the demand with no lens needed, and a varied result would imply inconsistent measurements.

8. Which fixation disparity curve is seen in an eso deviation?

- A. Type 1
- B. Type 2**
- C. Type 3
- D. Type 4

Fixation disparity curves show how a small, residual misalignment at fixation changes as you add horizontal prism. They reveal how the vergence system compensates for a phoria. In an eso deviation, the way the disparity responds to prism fits a pattern clinicians label as Type 2. This type is characterized by a monotonic, relatively predictable change in fixation disparity as prism is increased, with the misalignment moving toward zero (and crossing it at a modest prism value) in a way that matches the typical fusional vergence behavior seen with inward-turning eyes. Other patterns reflect different underlying responses of the vergence system, which don't align with the way an eso deviation behaves.

9. What are the Morgan's norms for Near BO smooth vergences?

- A. -----/7/4
- B. 9/19/10
- C. 13/21/13
- D. 17/21/11**

Morgan's norms give reference values for how much convergence (near BO, base-out) the eyes can produce under normal, smooth viewing at near distances. For near BO smooth vergences, the standard normative triplet is about 17/21/11 in prism diopters. That is why the option with 17/21/11 is the correct one—it reflects the typical near convergence range used as a benchmark in clinical binocular vision assessment. If a patient's near BO smooth vergences are close to these values, their convergence reserves are within normal limits. Significantly lower values can indicate a convergence insufficiency or related binocular issue, while higher values are less common but would indicate stronger fusional reserves.

10. Does the push-up test tend to overestimate or underestimate the amplitude of accommodation compared to other methods?

A. Overestimate due to RDM

B. Underestimate

C. Equal

D. Not predictable

The push-up method tends to overestimate how much the eye can accommodate because the real near target provides strong proximal cues and, as it moves closer, its retinal image grows larger. This retinal distance magnification increases the accommodative stimulus beyond the purely optical demand, so the measured near point is pushed closer and the calculated amplitude appears larger than the true accommodative capacity. In short, retinal distance magnification (proximal cues) biases the result upward, leading to an overestimation.

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Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://nbeobinocularvision.examzify.com>

We wish you the very best on your exam journey. You've got this!

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