

NBEO OCULAR MOTILITY 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 type of vergence is clinically measured as a distance phoria?**
 - A. Proximal Vergence
 - B. Tonic Vergence
 - C. Fusional Vergence
 - D. Accommodative Vergence

- 2. A non-comitant deviation occurs when the position of gaze is greater than how many prism diopters difference?**
 - A. > 3pd
 - B. > 5pd
 - C. > 2pd
 - D. > 10pd

- 3. A Type 1 Duane's Retraction syndrome is characterized by which limitation?**
 - A. Limited abduction
 - B. Limited adduction
 - C. Limited abduction and adduction
 - D. No restriction

- 4. Which of the following are alternative tests used to assess suppression in binocular vision besides Worth 4-dot?**
 - A. Bagolini lenses test and red-green (Bangerter) filter tests.
 - B. Maddox rod test.
 - C. Cover test.
 - D. Stereoacuity testing.

- 5. In Listing's Plane, which axis is vertical?**
 - A. W axis
 - B. X axis
 - C. Z axis
 - D. Y axis

- 6. In Hess-Lancaster testing, which flashlight color is typically given to the patient to match the examiner's light?**
- A. Red flashlight
 - B. Green flashlight
 - C. Blue flashlight
 - D. Yellow flashlight
- 7. Are versions a conjugate or disconjugate eye movement?**
- A. Disconjugate
 - B. Vertical
 - C. Horizontal
 - D. Conjugate
- 8. The neutral point is the direction of gaze where nystagmus changes direction.**
- A. End-point nystagmus
 - B. Neutral point
 - C. Null point
 - D. Gaze-evoked nystagmus
- 9. Oscillopsia is characterized by the sensation of which of the following?**
- A. Vertigo
 - B. Nystagmus
 - C. Diplopia
 - D. Oscillopsia
- 10. CORE stands for which combination of physiologic nystagmus types?**
- A. Caloric nystagmus
 - B. Optokinetic nystagmus
 - C. Rotational nystagmus
 - D. Caloric nystagmus, Optokinetic nystagmus, Rotational nystagmus, End-point nystagmus

Answers

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

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Explanations

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1. Which type of vergence is clinically measured as a distance phoria?

- A. Proximal Vergence
- B. Tonic Vergence**
- C. Fusional Vergence
- D. Accommodative Vergence

The resting baseline of eye alignment—tonic vergence—determines what we measure as a distance phoria. At distance, accommodation is minimal, so the eyes rely on this baseline vergence to stay aligned without extra focusing or near cues. A distance phoria reflects that inherent, resting alignment rather than the effort to fuse or accommodate. Accommodative vergence depends on focusing depth and is negligible at distance; proximal vergence is driven by perceived closeness and is a near-task cue; fusional vergence is the active adjustment used to maintain single vision when disparities occur, which isn't what a distance phoria test isolates. So the distance phoria primarily represents tonic vergence.

2. A non-comitant deviation occurs when the position of gaze is greater than how many prism diopters difference?

- A. > 3pd
- B. > 5pd**
- C. > 2pd
- D. > 10pd

Noncomitant deviations are when the amount of misalignment changes as the gaze direction changes. Clinically, if the difference in the deviation between gaze positions exceeds 5 prism diopters, it's considered noncomitant. This threshold helps separate true changes in alignment due to a restricted or palsied muscle from small measurement variances that can occur with exam technique. For example, you might find a large angle in one gaze and a noticeably smaller angle in another, with the difference over 5 PD, indicating noncomitance. If the variation is only a couple of prism diopters, it could be within normal measurement fluctuation and doesn't necessarily indicate a noncomitant deviation. So, the standard criterion is a difference greater than 5 prism diopters between gaze positions. Differences larger than this (such as greater than 10 PD) still fall under noncomitance, but 5 PD is the defining threshold.

3. A Type 1 Duane's Retraction syndrome is characterized by which limitation?

- A. Limited abduction**
- B. Limited adduction
- C. Limited abduction and adduction
- D. No restriction

Duane retraction syndrome in Type I shows a clear pattern: the eye cannot move outward well, so abduction is limited, while inward movement (adduction) is relatively preserved. This happens because the lateral rectus is not properly innervated, often due to a malformed or absent abducens nerve, so outward movement is diminished. When the eye is asked to look inward, co-contraction of the medial rectus with the misinnervated lateral rectus can pull the globe back into the orbit, causing globe retraction and a narrowing of the palpebral fissure. That combination—restricted abduction with preserved adduction and characteristic globe retraction on adduction—defines Type I. The other patterns fit Type II (adduction limited) or Type III (both directions limited), while no restriction would be normal motility.

4. Which of the following are alternative tests used to assess suppression in binocular vision besides Worth 4-dot?

- A. Bagolini lenses test and red-green (Bangerter) filter tests.**
- B. Maddox rod test.
- C. Cover test.
- D. Stereoacuity testing.

Suppression testing aims to determine whether one eye's input is being inhibited by the brain to avoid diplopia, and this is best revealed when the two eyes are presented with distinct, separate images that don't constantly force fusion. Bagolini lenses provide a very gentle, binocular dissociation. When a patient looks at a fixed target through paired, fine-line lenses, each eye sees a faint line that, if fusion is intact, the brain combines into one percept. If one eye is suppressed, the lines may appear incomplete or the patient may report seeing lines from only one eye or in disrupted locations. The patterns map where suppression occurs and how extensive it is, without creating a strong diplopic situation. Red-green filters (or Bangerter filter tests) place translucent color filters in front of each eye and present red and green targets. The patient reports which color image they see and where. If suppression is present, the image from the suppressed eye won't be seen, or the colors won't fuse, revealing the eye's suppression and often its extent. This method directly probes the interocular image competition and is a practical alternative to Worth 4-dot for identifying suppression. Other common tests have different purposes. The Maddox rod test mainly breaks fusion to measure ocular misalignment (phorias) under dissociation, so it's more about quantifying deviation than mapping suppression patterns. The cover test assesses alignment by alternating occlusion but doesn't describe which eye is suppressed or how suppression varies across the visual field. Stereoacuity testing evaluates depth perception and the functional outcome of binocular fusion, but it doesn't systematically map which eye is suppressed or how suppression is distributed. So, Bagolini lenses and red-green filter approaches directly illuminate suppression patterns and are therefore the primary alternatives to Worth 4-dot for this purpose.

5. In Listing's Plane, which axis is vertical?

- A. W axis
- B. X axis
- C. Z axis**
- D. Y axis

Listing's plane is the plane in which the eye's rotation axis lies when moving from the primary position; eye orientation to any gaze can be represented by a single rotation about an axis that lies in that plane. In the standard NBEO coordinate convention, the vertical direction within Listing's plane aligns with the Z axis, so the axis that serves as the vertical one in Listing's plane is Z. This is why the vertical axis in Listing's plane is Z.

6. In Hess-Lancaster testing, which flashlight color is typically given to the patient to match the examiner's light?

- A. Red flashlight
- B. Green flashlight**
- C. Blue flashlight
- D. Yellow flashlight

In Hess-Lancaster testing, the patient's task is to align their own light with the examiner's light on a translucent screen, so you can map how the eyes move together or separately. The patient is given a green flashlight to match the examiner's light because using the same color makes it straightforward to see when the two lights coincide on the grid. This simultaneous, color-matched alignment reveals the pattern of ocular motility and highlights any muscles that are underacting or overacting, helping identify palsies or restriction. The green color is chosen for clear visibility and to keep the two lights distinguishable on the screen while the patient performs the matching.

7. Are versions a conjugate or disconjugate eye movement?

- A. Disconjugate
- B. Vertical
- C. Horizontal
- D. Conjugate**

Versions are conjugate eye movements: both eyes move in the same direction and by the same amount, so the gaze shifts as a unit while keeping the eyes aligned for single binocular vision. This coordinated, same-direction movement can be horizontal, vertical, or oblique. In contrast, disconjugate movements—vergence—occur when the eyes move in opposite directions to focus on objects at different depths (convergence for near, divergence for far). So the best description is that versions are conjugate movements.

8. The neutral point is the direction of gaze where nystagmus changes direction.

- A. End-point nystagmus
- B. Neutral point**
- C. Null point
- D. Gaze-evoked nystagmus

The key idea is that nystagmus has a specific gaze direction where its velocity is zero and the direction of the eye drift reverses. At this neutral point, the slow phase of nystagmus effectively stops, so the quick corrective movements switch direction. That's why this direction is described as the point where nystagmus changes direction. Clinically, this concept helps explain why people with congenital or gaze-evoked nystagmus often have a preferred eccentric gaze—the null or neutral point—where the nystagmus is minimized or its direction flips. While some texts use "null point" to describe a similar phenomenon, the description given in the question aligns with the neutral point: the direction of gaze at which the nystagmus reverses. End-point nystagmus refers to nystagmus that appears at extreme gaze due to mechanical limitation, and gaze-evoked nystagmus arises when nystagmus is provoked by sustaining a non-primary gaze; these describe different patterns and aren't about the point where velocity crosses zero and reverses.

9. Oscillopsia is characterized by the sensation of which of the following?

- A. Vertigo
- B. Nystagmus
- C. Diplopia
- D. Oscillopsia**

Oscillopsia is the perception that the visual environment moves or bounces with head movement because the reflex that stabilizes images on the retina is impaired. Normally, as you move your head, the vestibulo-ocular reflex moves the eyes in the opposite direction to keep the scene steady. When that stabilization fails (as in bilateral vestibular loss or certain cerebellar disorders), the world slides across the retina, and you feel the surroundings oscillating. This differs from vertigo, which is a spinning sensation either of the body or of the surrounding environment, not specifically of the visual scene. Nystagmus is an involuntary eye movement you might observe clinically, not the subjective sense of the environment moving. Diplopia is double vision from misalignment or binocular fusion problems. So the characteristic experience in oscillopsia is the moving or jumping visual scene during head movement.

10. CORE stands for which combination of physiologic nystagmus types?

- A. Caloric nystagmus
- B. Optokinetic nystagmus
- C. Rotational nystagmus
- D. Caloric nystagmus, Optokinetic nystagmus, Rotational nystagmus, End-point nystagmus**

CORE is the group of four physiologic nystagmus types driven by different stimuli: caloric nystagmus from warm or cold irrigation of the ear, optokinetic nystagmus from movement of a visual scene, rotational nystagmus from actual head rotation, and end-point nystagmus that appears when the eyes reach the extreme end of a gaze. These four together represent the full set of normal, physiologic nystagmus responses typically tested. The other options list only some of these types, omitting one or more components, so they don't capture the complete CORE combination. Therefore, the full four-type set is the correct choice.

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://nbeoocularmotility.examzify.com>

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

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