

VESTIBULAR SYSTEM PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://vestibularsystem.examzify.com>



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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 sign is most consistent with a peripheral vestibular lesion?**
 - A. Spontaneous nystagmus that persists with fixation
 - B. Direction-changing nystagmus with gaze
 - C. Unidirectional, fatigable nystagmus with no skew deviation
 - D. Bilateral symmetric caloric response

- 2. In VEMP testing, which muscle is typically monitored for oVEMP?**
 - A. Ipsilateral sternocleidomastoid muscle
 - B. Contralateral trapezius muscle
 - C. Inferior oblique / extraocular muscles beneath the eyes
 - D. Masseter muscle

- 3. What does vestibulo-ocular reflex testing assess, and which methods are commonly used?**
 - A. It assesses the vestibulo-ocular reflex; commonly using head impulse test and VOR gain
 - B. It tests auditory nerve function
 - C. It measures spinal reflexes
 - D. It assesses visual acuity only

- 4. What is the primary therapeutic aim of canalith repositioning maneuvers?**
 - A. To move otoconia from the semicircular canals back into the utricle
 - B. To destroy otolithic organs
 - C. To reduce hearing
 - D. To widen the vestibular aqueduct

- 5. The vestibular system has broad connections influencing which functions?**
 - A. Eye movements
 - B. Eye movements, postural control, and autonomic regulation
 - C. Hearing
 - D. Visual perception

- 6. The arrangement of vestibular organs makes them most sensitive to which stimulus?**
- A. Changes in acceleration
 - B. Gravity
 - C. Sound frequency
 - D. Temperature
- 7. The oculoccephalic reflex is commonly known as which reflex?**
- A. Blink reflex
 - B. Doll eye reflex
 - C. Corneal reflex
 - D. Gag reflex
- 8. Which statement best captures a key difference between peripheral and central vertigo on examination?**
- A. Peripheral vertigo is always accompanied by vertigo lasting minutes.
 - B. Peripheral vertigo often has single-direction nystagmus suppressed by fixation and a positive head impulse test; central vertigo can have gaze-evoked or direction-changing nystagmus and is less likely to be suppressed by fixation.
 - C. Central vertigo always presents with hearing loss.
 - D. Nystagmus characteristics do not aid differentiation.
- 9. Which finding most strongly suggests a peripheral vestibular lesion rather than a central one?**
- A. Unidirectional and fatigable nystagmus
 - B. Nystagmus that changes direction with gaze
 - C. Marked cognitive slowing
 - D. Bilateral symmetry on caloric testing
- 10. Which statement about BPPV is TRUE?**
- A. Vertigo lasting all day without head movement
 - B. It is a central vestibular disorder
 - C. It commonly affects only hearing, not vertigo
 - D. Vertigo episodes are brief and triggered by changes in head position

Answers

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

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Explanations

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1. Which sign is most consistent with a peripheral vestibular lesion?

- A. Spontaneous nystagmus that persists with fixation
- B. Direction-changing nystagmus with gaze
- C. Unidirectional, fatigable nystagmus with no skew deviation**
- D. Bilateral symmetric caloric response

A peripheral vestibular lesion tends to produce a nystagmus that is unidirectional, fatigable, and without skew deviation. When one labyrinth is affected, the eye movement pattern beats in a single direction toward the healthy ear; this nystagmus often fatigues over time as the system adapts. The absence of a skew deviation means there isn't a vertical misalignment pointing to brainstem or central involvement. In contrast, central patterns often show direction-changing nystagmus with gaze or spontaneous nystagmus that persists with fixation, and bilateral symmetric caloric responses suggest bilateral or central issues rather than a unilateral peripheral problem. So the described unidirectional, fatigable nystagmus with no skew deviation best fits a peripheral lesion.

2. In VEMP testing, which muscle is typically monitored for oVEMP?

- A. Ipsilateral sternocleidomastoid muscle
- B. Contralateral trapezius muscle
- C. Inferior oblique / extraocular muscles beneath the eyes**
- D. Masseter muscle

oVEMP measures the vestibulo-ocular reflex by recording from extraocular muscles. The inferior oblique muscle, located beneath the eye, is the primary muscle monitored because it reliably reflects utricular-driven vestibulo-ocular activity when stimuli such as sound or vibration are used. Electrodes are placed under the eye to capture potentials from these muscles, which distinguishes oVEMP from cVEMP that uses neck muscles like the sternocleidomastoid. So the monitored muscle for oVEMP is the inferior oblique / extraocular muscles beneath the eyes.

3. What does vestibulo-ocular reflex testing assess, and which methods are commonly used?

- A. It assesses the vestibulo-ocular reflex; commonly using head impulse test and VOR gain**
- B. It tests auditory nerve function
- C. It measures spinal reflexes
- D. It assesses visual acuity only

The vestibulo-ocular reflex (VOR) is the mechanism that keeps what you see stable when your head moves. Testing VOR asks how well this reflex stabilizes gaze, so you can detect vestibular problems. A quick bedside method, the head impulse test, probes high-frequency VOR function. You look at a fixed target and the clinician makes small, rapid, unpredictable head movements. If the VOR is working, the eyes stay on the target; if not, you'll see a quick catch-up saccade as the eyes refocus on the target. For a quantitative readout, you measure the VOR gain—the ratio of eye velocity to head velocity. A normal gain is around 1.0, meaning the eyes move the same amount in the opposite direction as the head. Reduced gain indicates impaired VOR function. This gain is commonly obtained with video head impulse testing (vHIT), which records precise eye and head movements to give a numerical gain and identify corrective saccades. Other tests like caloric testing or rotary chair can assess different frequencies of VOR and broader semicircular canal function, but the most widely used practical approach in many clinics is combining the head impulse test with VOR gain measurement.

4. What is the primary therapeutic aim of canalith repositioning maneuvers?

A. To move otoconia from the semicircular canals back into the utricle

B. To destroy otolithic organs

C. To reduce hearing

D. To widen the vestibular aqueduct

Canalith repositioning maneuvers aim to relocate the loose otoconia from the semicircular canals back into the utricle. Otoconia are crystals that normally reside in the utricle and saccule to sense gravity. When they drift into a semicircular canal, their presence makes the canal sensitive to head movements, causing spinning vertigo and abnormal eye movements. By guiding the head through a precise sequence of positions, gravity helps the crystals move along the canal and out into the utricle, where they no longer disrupt vestibular signaling. This directly addresses the abnormal stimulation causing vertigo, leading to symptom relief. The other options don't fit because destroying otolithic organs would cause irreversible vestibular loss, reducing hearing isn't the goal of these maneuvers, and widening the vestibular aqueduct would alter inner-ear fluid balance rather than correct displaced crystals.

5. The vestibular system has broad connections influencing which functions?

A. Eye movements

B. Eye movements, postural control, and autonomic regulation

C. Hearing

D. Visual perception

The vestibular system provides motion information that the brain uses to coordinate gaze, balance, and bodily state. It drives eye movements through the vestibulo-ocular reflex, stabilizing vision when the head moves. It also communicates with the spinal cord via vestibulospinal pathways to influence muscle tone and reflexes that keep us upright and maintain posture. Additionally, vestibular input reaches autonomic centers in the brainstem, helping regulate heart rate, blood pressure, and visceral responses, which can also produce nausea or changes in arousal during motion. Hearing and visual perception rely on separate pathways (cochlear/auditory and cortical visual systems), so while vestibular input supports gaze stability, its main broad influences are eye movements, postural control, and autonomic regulation.

6. The arrangement of vestibular organs makes them most sensitive to which stimulus?

A. Changes in acceleration

B. Gravity

C. Sound frequency

D. Temperature

The vestibular system is built to sense how the head moves through space by detecting accelerations. The otolith organs (utricle and saccule) have hair cells embedded in a gel with calcium carbonate crystals that respond when linear speed or head tilt causes inertia to lag the motion, bending the hair cells and signaling linear acceleration along different axes. The three semicircular canals are oriented in orthogonal planes and detect angular acceleration through the movement of endolymph fluid inside each canal, bending hair cells to register rotational changes. Because gravity is a constant influence, the most informative and robust signals come from changes in acceleration rather than a steady gravitational pull. Sound frequency and temperature are not primary cues processed by the vestibular sensors in this context, which is why the arrangement best supports detecting changes in acceleration.

7. The oculoccephalic reflex is commonly known as which reflex?

- A. Blink reflex
- B. Doll eye reflex**
- C. Corneal reflex
- D. Gag reflex

The oculoccephalic reflex, known as the doll eye reflex, shows how the eyes move opposite to head movement to keep the gaze steady. When the head is turned, signals from the vestibular system drive the eye muscles so the eyes shift in the opposite direction and then re-center on the target. This demonstrates intact brainstem and vestibular pathways; if the reflex is present, brainstem circuits controlling eye movements are functioning. If it's absent in a comatose patient, that points to brainstem dysfunction. Other reflexes listed are different: the blink and corneal reflex involve eyelid closure in response to eyelid or corneal stimulation, and the gag reflex involves the throat with cranial nerves IX and X. They do not describe eye movement in response to head movement.

8. Which statement best captures a key difference between peripheral and central vertigo on examination?

- A. Peripheral vertigo is always accompanied by vertigo lasting minutes.
- B. Peripheral vertigo often has single-direction nystagmus suppressed by fixation and a positive head impulse test; central vertigo can have gaze-evoked or direction-changing nystagmus and is less likely to be suppressed by fixation.**
- C. Central vertigo always presents with hearing loss.
- D. Nystagmus characteristics do not aid differentiation.

The crucial distinction on examination is how eye movements and reflexes behave. Peripheral vertigo typically shows a horizontal, unidirectional fast phase that is suppressed when the patient fixes their gaze, and the head impulse test is usually positive (a corrective saccade appears with rapid head turns), indicating a peripheral vestibular deficit. In contrast, central vertigo often features gaze-evoked or direction-changing nystagmus, and the nystagmus is not reliably suppressed by fixation; the head impulse test is often normal because the problem lies in the brain rather than the peripheral vestibular apparatus. Hearing loss is not a reliable differentiator, and duration can vary in both.

9. Which finding most strongly suggests a peripheral vestibular lesion rather than a central one?

- A. Unidirectional and fatigable nystagmus**
- B. Nystagmus that changes direction with gaze
- C. Marked cognitive slowing
- D. Bilateral symmetry on caloric testing

The thing being tested is how eye movements reveal where a vestibular problem lies. A finding that points most strongly to a peripheral vestibular lesion is unidirectional nystagmus that fatigues with repetition. When the inner ear on one side is damaged, the imbalance drives the eyes with a fast phase in a single direction in primary gaze, and the response tends to lessen with repeated testing or fixation. This fatigue and single-direction pattern fit the peripheral input problem and the intact central pathways that produce a stable, direction-fixed nystagmus. In contrast, central lesions often produce nystagmus that can change direction with gaze, can be vertical or torsional, and is typically not fatigable, and they're more likely to be accompanied by other neurologic signs like cognitive slowing or limb abnormalities. Bilateral symmetry on caloric testing doesn't strongly indicate a peripheral lesion because it could reflect normal variation or bilateral involvement rather than a unilateral peripheral deficit.

10. Which statement about BPPV is TRUE?

- A. Vertigo lasting all day without head movement
- B. It is a central vestibular disorder
- C. It commonly affects only hearing, not vertigo
- D. Vertigo episodes are brief and triggered by changes in head position**

Positional, brief vertigo is the hallmark of BPPV. It happens when head movements change the orientation of gravity in the inner ear, causing small crystals (otoconia) to drift into a semicircular canal, most often the posterior canal. As you move your head, these crystals shift within the canal and briefly stimulate hair cells, producing a spinning sensation that lasts seconds to a minute and often with a brief nystagmus. This pattern—short episodes triggered by specific head positions such as tipping the head back, rolling over in bed, or getting out of bed—is what distinguishes BPPV from vertigo that lasts all day or isn't linked to head movements. BPPV is a peripheral vestibular disorder, not a central one, and hearing is usually not affected, so vertigo remains the primary symptom rather than hearing loss. The combination of brief, position-triggered episodes is the best reflection of the condition's typical presentation.

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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://vestibularsystem.examzify.com>

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

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