DISORDERS OF THE NEUROLOGICAL SYSTEM PRACTICE TEST (SAMPLE)

STUDY GUIDE

Prepare with structure. Pass with confidence

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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

1. What is the typical age range for onset of Huntington disease?

A. Childhood

B. 30s to 40s

C. Late 70s

D. Adolescence

2. The sensorimotor assessment for stroke patients evaluates functions above and below which landmark?

A. The shoulders

B. The hips

C. The knees

D. The neck

3. Which statement best describes the pathophysiology of Parkinson disease and a medication used to treat it?

A. Degeneration of nigrostriatal dopaminergic neurons causing bradykinesia, resting tremor, and rigidity; levodopa replenishes dopamine

B. Autoimmune destruction of acetylcholine neurons; acetylcholine antagonists

C. Hyperactivity of the GABAergic system; benzodiazepines

D. Demyelination of CNS neurons; interferon-beta

4. What can cause cerebral edema?

A. Dehydration

B. Hyperglycemia

C. Ischemia from a blockage of an artery in the brain (hypoxia)

D. Low temperature

5. Which condition is classically characterized by a triad of gait disturbance, urinary incontinence, and cognitive impairment with ventriculomegaly on imaging?

A. Normal pressure hydrocephalus

B. Alzheimer's disease

C. Huntington disease

D. Brain tumor

6. What red-flag features require urgent evaluation in a patient with new-onset severe headache?

A. Gradual onset over days

B. Headache relieved by sleep

C. Headache worse with low activity

D. Thunderclap onset; 'worst headache of life'; rapidly progressive headache with fever, neck stiffness, altered mental status, focal deficits, or signs of meningismus; abnormal vitals

7. Which feature favors Alzheimer's disease over dementia with Lewy bodies?

A. Early memory impairment

B. Early visuospatial deficits

C. Early visual hallucinations

D. Prominent parkinsonism early

8. Nystagmus can be a sign of which dysfunction?

A. Central cataracts

B. Cerebellum or inner ear dysfunction

C. Retinal detachment

D. Optic neuritis

9. What is locked-in syndrome, and which functions are preserved?

A. Brainstem lesion (ventral pons) causing quadriplegia and inability to speak, with preserved consciousness and vertical eye movements.

B. Cerebral cortex lesion causing aphasia.

C. Cerebellar lesion causing ataxia.

D. Spinal cord transection.

10. How do you know what type of stroke it is or what treatment is best?

A. You can tell from symptoms alone.

B. Physical examination alone

C. Blood glucose level alone

D. CT scan or MRI

Answers

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

Explanations

1. What is the typical age range for onset of Huntington disease?

A. Childhood

B. 30s to 40s

C. Late 70s

D. Adolescence

Huntington disease typically begins in midlife, most often in the 30s to 40s. This midlife window is the most common pattern seen in patients, making it the best match among the options. While some individuals can present earlier in juvenile HD (before 20) if the CAG repeat expansion is large, and onset very late in life is possible but rare, the 30s to 40s remains the classic and most likely age range for initial symptoms such as motor changes (like chorea), cognitive decline, and psychiatric signs.

2. The sensorimotor assessment for stroke patients evaluates functions above and below which landmark?

A. The shoulders

B. The hips

C. The knees

D. The neck

The main concept is using a consistent landmark to separate body regions when assessing sensorimotor function after a stroke. The shoulders provide that dividing line for the upper body: what you test above the shoulder girdle (head, neck, shoulder-area trunk) versus what you test below it (the arm from upper arm down to the hand). This distinction helps clinicians track recovery patterns in proximal versus distal segments and tailor rehab goals accordingly. The hips or knees pertain to the lower body and gait, while the neck isn't used as the standard dividing point for this upper-extremity assessment, making the shoulders the practical landmark.

3. Which statement best describes the pathophysiology of Parkinson disease and a medication used to treat it?

A. Degeneration of nigrostriatal dopaminergic neurons causing bradykinesia, resting tremor, and rigidity; levodopa replenishes dopamine

B. Autoimmune destruction of acetylcholine neurons; acetylcholine antagonists

C. Hyperactivity of the GABAergic system; benzodiazepines

D. Demyelination of CNS neurons; interferon-beta

Parkinson disease is driven by loss of dopamine-producing neurons in the nigrostriatal pathway, from the substantia nigra to the striatum. This dopaminergic deficit disrupts the balance of the basal ganglia circuits, shifting activity toward the indirect pathway and producing the characteristic motor symptoms: bradykinesia, resting tremor, and rigidity. Levodopa works best here because it is a precursor to dopamine that can cross the blood-brain barrier. Once inside the brain, it is converted to dopamine, helping to restore the depleted neurotransmitter levels in the striatum and improve movement. To maximize brain dopamine and minimize peripheral side effects, it is usually given with a peripheral decarboxylase inhibitor (such as carbidopa), which prevents large amounts of levodopa from being converted to dopamine outside the brain. The other choices describe different diseases or mechanisms that don't capture the main pathophysiology of Parkinson disease.

4. What can cause cerebral edema?

A. Dehydration

B. Hyperglycemia

C. Ischemia from a blockage of an artery in the brain (hypoxia)

D. Low temperature

Cerebral edema happens when brain tissue swells from fluid buildup. A common trigger is ischemia from a blocked artery in the brain, which cuts off oxygen and glucose to brain cells. Without enough energy, the Na+/K+ ATPase pumps fail, causing sodium and water to flood into cells. The result is cytotoxic edema, where individual brain cells swell. If injury progresses, the blood–brain barrier can become leaky, letting fluid spill into the surrounding tissue and causing vasogenic edema. Together, these processes raise intracranial pressure and threat neural function. Dehydration tends to reduce brain water overall and can cause brain cells to shrink rather than swell, so it isn't a typical cause of edema. Hyperglycemia by itself doesn't directly produce edema, though severe osmotic or metabolic disturbances can contribute in certain contexts. Very low temperatures can lower metabolic demand and may have protective effects in some situations, not a primary cause of cerebral edema.

5. Which condition is classically characterized by a triad of gait disturbance, urinary incontinence, and cognitive impairment with ventriculomegaly on imaging?

A. Normal pressure hydrocephalus

B. Alzheimer's disease

C. Huntington disease

D. Brain tumor

This pattern points to normal pressure hydrocephalus. The trio of gait disturbance, urinary incontinence, and cognitive impairment is classic for this condition, and imaging shows ventriculomegaly despite normal or only intermittently elevated CSF pressure. The gait change is often the earliest sign and is described as a magnetic or shuffling gait, reflecting disruption of frontal–subcortical circuits that control walking. As the condition progresses, cognitive changes emerge and urinary incontinence can appear, again tied to frontal lobe pathways. Imaging showing enlarged ventricles out of proportion to the cortical surface supports the diagnosis, with the underlying issue being impaired CSF absorption at the arachnoid granulations. Because the pressure readings are typically normal, this is termed "normal pressure" hydrocephalus, even though the ventricles are enlarged. A key point is that this syndrome can improve after CSF diversion, such as a shunt, and the gait often responds best to treatment. Other conditions don't fit this exact combination. Alzheimer's disease mainly involves progressive memory loss with cortical atrophy rather than a prominent ventriculomegaly pattern. Huntington disease features chorea and caudate atrophy rather than the characteristic triad with enlarged ventricles. A brain tumor would present with focal neurologic signs and a mass lesion on imaging, not the diffuse ventricular enlargement with this specific symptom cluster.

6. What red-flag features require urgent evaluation in a patient with new-onset severe headache?

A. Gradual onset over days

B. Headache relieved by sleep

C. Headache worse with low activity

D. Thunderclap onset; 'worst headache of life'; rapidly progressive headache with fever, neck stiffness, altered mental status, focal deficits, or signs of meningismus; abnormal vitals

Recognizing red-flag features that signal a life-threatening intracranial problem is the key idea here. A thunderclap onset means the headache reaches peak intensity within seconds to minutes, which is a classic warning for aneurysmal subarachnoid hemorrhage and other acute catastrophes. When the headache is described as the worst of life and progresses rapidly, and it's accompanied by fever, neck stiffness, altered mental status, focal neurological signs, meningismus, or abnormal vital signs, the situation becomes a medical emergency. These findings together point to an acute intracranial process that requires urgent imaging and evaluation right away. The other patterns described—gradual onset over days, relief by sleep, or headaches that worsen with low activity—fit more with common primary headaches like migraine or tension-type headaches and do not imply an immediate life-threatening condition, so they don't carry the same urgency. Immediate workup is reserved for the thunderclap, worst-headache-ever presentation with accompanying red flags listed above.

7. Which feature favors Alzheimer's disease over dementia with Lewy bodies?

A. Early memory impairment

B. Early visuospatial deficits

C. Early visual hallucinations

D. Prominent parkinsonism early

Early memory impairment is most consistent with Alzheimer's disease because the disease targets the hippocampus and medial temporal structures early, leading to prominent anterograde amnesia and difficulty forming new memories. Dementia with Lewy bodies, on the other hand, typically shows early visuospatial deficits and visual hallucinations, with parkinsonian features often appearing early as well. So memory loss at the outset best distinguishes Alzheimer's from DLB, while visuospatial problems, visual hallucinations, and early parkinsonism point more toward DLB.

8. Nystagmus can be a sign of which dysfunction?

A. Central cataracts

B. Cerebellum or inner ear dysfunction

C. Retinal detachment

D. Optic neuritis

Nystagmus shows a disruption of the gaze-stabilizing system, most often from problems with the vestibulo-ocular pathway in the inner ear or with the cerebellum that tunes and coordinates eye movements. When the inner ear's semicircular canals or the cerebellum aren't functioning properly, the brain receives conflicted signals about head motion, so the eyes drift and then quickly correct in a rhythmic, fluttering way. This pattern is characteristic of vestibular or cerebellar dysfunction, which is why inner-ear or cerebellar problems are the best fit. Central cataracts blur vision by scattering light through the lens, not by causing rhythmic eye movements. Retinal detachment and optic neuritis primarily affect vision clarity and color/contrast perception, often with pain or field loss, rather than producing nystagmus as a typical sign.

9. What is locked-in syndrome, and which functions are preserved?

A. Brainstem lesion (ventral pons) causing quadriplegia and inability to speak, with preserved consciousness and vertical eye movements.

B. Cerebral cortex lesion causing aphasia.

C. Cerebellar lesion causing ataxia.

D. Spinal cord transection.

Locked-in syndrome is a brainstem–based state where a person is fully conscious and aware but cannot move most of the body or speak because the pathways that control voluntary movement are damaged, usually from a ventral pontine lesion. What makes this pattern distinctive is that while the limbs and bulbar muscles are paralyzed, the patient can still follow with the eyes and blink, typically with intact vertical eye movements. That preservation of consciousness and vertical gaze signals that the problem lies in the lower brainstem affecting motor tracts, not in the cerebral cortex or overall brain function. A cerebral cortex lesion would more likely produce aphasia or cognitive changes rather than total paralysis with preserved eye movements. A cerebellar lesion causes coordination problems like ataxia, not this profound, selective loss of voluntary movement with preserved awareness. A spinal cord transection would cut off signals to the body below the injury level, but would not typically spare eye movements or consciousness, and the pattern of intact eye movement with widespread paralysis points to a brainstem ventral lesion.

10. How do you know what type of stroke it is or what treatment is best?

A. You can tell from symptoms alone.

B. Physical examination alone

C. Blood glucose level alone

D. CT scan or MRI

Determining stroke type requires imaging. Clinical symptoms alone often overlap between ischemic and hemorrhagic strokes, so you can't reliably tell which type it is just from how the patient presents or from a physical exam. Blood glucose levels can rise after a stroke but they don't reveal the type or the best treatment. Imaging with a CT scan or MRI is essential because it shows whether there is bleeding or a clot. A CT scan is usually the first test in the emergency setting because it's fast and can quickly exclude a hemorrhage, which is critical before giving clot-dissolving therapies. If the CT doesn't show a bleed but suspicion remains for ischemia, MRI—especially diffusion-weighted imaging—can detect early ischemic changes and help assess the extent of tissue at risk. Advanced imaging like CT or MR angiography can identify vessel occlusions that may be treated with procedures like thrombectomy. So the best way to know what type of stroke it is and what treatment to pursue is imaging with CT or MRI, because it provides direct evidence of bleeding, infarct, and vascular status that clinical exam alone cannot determine.

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:

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