

PANCE NEUROLOGY PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. MS typically affects which demographic group?**
 - A. Older men
 - B. Young women
 - C. Children under 5
 - D. Elderly women
- 2. What is the most common cause of thunderclap headache?**
 - A. Migraine with aura
 - B. Tension-type headache
 - C. Cluster headache
 - D. Aneurysmal subarachnoid hemorrhage
- 3. Most common region affected by hemorrhagic stroke?**
 - A. Thalamus
 - B. Cerebellum
 - C. Putamen
 - D. Brainstem
- 4. Which finding on lumbar puncture supports SAH when CT is negative?**
 - A. Increased opening pressure
 - B. Elevated protein
 - C. Xanthochromia
 - D. Normal CSF glucose
- 5. What is the typical age range for simple febrile seizures?**
 - A. 6 months to 5 years
 - B. 0 to 12 months
 - C. 5 to 10 years
 - D. 10 to 15 years
- 6. In meningitis, which age group is described as being commonly affected by *Neisseria meningitidis* according to typical age-based patterns?**
 - A. Under 5 years
 - B. Over age 50
 - C. 20-40 years
 - D. Neonates

- 7. What is the first-line treatment for status epilepticus?**
- A. IV Diazepam
 - B. IV Lorazepam
 - C. PO Valproic acid
 - D. IV Midazolam
- 8. Which nerve is affected in carpal tunnel syndrome?**
- A. Ulnar nerve
 - B. Median nerve
 - C. Radial nerve
 - D. Axillary nerve
- 9. Which statement correctly lists the two agents commonly considered first-line disease-modifying therapies for relapsing MS?**
- A. Interferon beta and glatiramer acetate
 - B. Ocrelizumab and fingolimod
 - C. Rituximab and azathioprine
 - D. Cyclophosphamide and methotrexate
- 10. In the described treatment approach, which drug class is used to rapidly control ongoing seizures?**
- A. Benzodiazepines
 - B. Barbiturates
 - C. Antidepressants
 - D. Antihistamines

Answers

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

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Explanations

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1. MS typically affects which demographic group?

- A. Older men
- B. Young women**
- C. Children under 5
- D. Elderly women

MS is an autoimmune demyelinating disease of the central nervous system that most often begins in young adulthood, with a clear female predominance. The typical onset is in the 20s to 40s, and women are affected roughly two to three times more often than men. This makes young women the most commonly affected demographic. Earlier childhood MS exists but is unusual, and MS in older adults is less common, which is why those groups aren't the typical pattern.

2. What is the most common cause of thunderclap headache?

- A. Migraine with aura
- B. Tension-type headache
- C. Cluster headache
- D. Aneurysmal subarachnoid hemorrhage**

A thunderclap headache is defined by a sudden onset that reaches maximum intensity within seconds, signaling a potentially life threatening brain event. The most common cause is rupture of a saccular (berry) aneurysm leading to nontraumatic subarachnoid hemorrhage. When an aneurysm ruptures, blood rapidly fills the subarachnoid space and irritates the meninges, producing an abrupt, worldwide severe headache often described as the worst headache of life. This presentation is an emergency and demands rapid evaluation: a noncontrast head CT is the first test to detect blood; if CT is negative but suspicion remains, a lumbar puncture can reveal xanthochromia or elevated red blood cell count in the CSF; vascular imaging then identifies the aneurysm. The standard management focuses on securing the aneurysm to prevent rebleeding and using measures like nimodipine to reduce the risk of vasospasm. Other headache types can be sudden, but they usually do not produce this abrupt, maximal-intensity onset with the potential for subarachnoid blood.

3. Most common region affected by hemorrhagic stroke?

- A. Thalamus
- B. Cerebellum
- C. Putamen**
- D. Brainstem

Bleeding in hypertensive intracerebral hemorrhage most commonly occurs in the putamen. Chronic hypertension damages small penetrating vessels, particularly the lenticulostriate arteries from the middle cerebral artery, leading to lipohyalinosis and Charcot-Bouchard microaneurysms. When these fragile vessels rupture, the putamen receives the brunt of the hemorrhage more often than other deep structures. Clinically, this site typically produces abrupt focal deficits with contralateral motor and sensory involvement, and can be accompanied by gaze abnormalities or headache. The thalamus is a common alternative site, but the putamen remains the most frequent region affected, with cerebellar and brainstem hemorrhages being less common.

4. Which finding on lumbar puncture supports SAH when CT is negative?

- A. Increased opening pressure
- B. Elevated protein
- C. Xanthochromia**
- D. Normal CSF glucose

Xanthochromia reflects breakdown products of blood in the cerebrospinal fluid and is the finding that most strongly supports subarachnoid hemorrhage when a CT scan is negative. When bleeding spills into the subarachnoid space, red cells lyse and hemoglobin is processed by the body into bilirubin, which gives CSF a yellow tint. This discoloration may not be visible immediately but becomes detectable within hours (often after about 4 hours) and can persist for days to weeks, making LP useful when CT misses the bleed. Other common LP findings like elevated opening pressure, increased protein, or normal glucose are nonspecific or not diagnostic for SAH, so the presence of xanthochromia is the best indicator that SAH occurred.

5. What is the typical age range for simple febrile seizures?

- A. 6 months to 5 years**
- B. 0 to 12 months
- C. 5 to 10 years
- D. 10 to 15 years

Simple febrile seizures happen when a child has a fever, and they most commonly occur during early childhood. The classic age window is from about 6 months up to 5 years. Before 6 months the nervous system isn't typically in a stage where febrile seizures occur, and after about 5 years the likelihood drops significantly, with much less frequent presentations. That's why the age range 6 months to 5 years is the best fit. These seizures are usually generalized, last a short time (often under 15 minutes), and don't recur within 24 hours in most uncomplicated cases, and the overall prognosis is excellent.

6. In meningitis, which age group is described as being commonly affected by *Neisseria meningitidis* according to typical age-based patterns?

- A. Under 5 years
- B. Over age 50**
- C. 20-40 years
- D. Neonates

**Neisseria meningitidis* meningitis shows a noticeable bimodal pattern: it most commonly affects very young children and then adolescents/young adults. In infancy, the risk is highest in the first year of life, and a second peak occurs in teens and people in their early 20s, often in settings like dormitories or military barracks. Neonates are more commonly affected by other meningitis pathogens (like group B Strep or *E. coli*), and while older adults can get meningococcal disease, it's not the typical pattern. So the idea that this organism commonly hits people over age 50 doesn't fit the usual age distribution. The infant/adolescent pattern is the hallmark here.*

7. What is the first-line treatment for status epilepticus?

- A. IV Diazepam
- B. IV Lorazepam**
- C. PO Valproic acid
- D. IV Midazolam

In status epilepticus you need rapid seizure control with a drug that also provides sustained suppression to prevent rebound seizures. Benzodiazepines are the immediate first step because they quickly enhance GABAergic inhibition in the brain. Among the IV options, lorazepam is preferred because it combines a fast onset with a longer duration of action in the CNS, giving more prolonged seizure control after a single dose. Diazepam also acts quickly, but it tends to dissipate from the brain more quickly due to redistribution into body fat, so seizures can recur and dosing may need to be repeated. Midazolam can be used, especially if IV access is challenging, but when IV access is solid, lorazepam offers the best balance of rapid effect and longer-lasting control. PO valproic acid isn't suitable for acute management because it has slower onset and isn't given IV in this emergency context. So, the optimal first-line choice for terminating status epilepticus promptly and maintaining control is IV lorazepam.

8. Which nerve is affected in carpal tunnel syndrome?

- A. Ulnar nerve
- B. Median nerve**
- C. Radial nerve
- D. Axillary nerve

Compression of the median nerve as it travels through the carpal tunnel is what defines carpal tunnel syndrome. This nerve provides sensation to the palmar surface of the thumb, index, middle, and the radial half of the ring finger, and it supplies the thenar muscles that control thumb opposition. When the nerve is pressed in the carpal tunnel, you get numbness, tingling, and often weakness in the thenar muscles, which fits the classic pattern of median nerve involvement. The ulnar nerve would produce numbness in the little finger and the medial half of the ring finger with different motor effects; the radial nerve affects the dorsal hand and wrist extension rather than the typical carpal tunnel sensory pattern; and the axillary nerve involves the shoulder, not the hand. So the nerve affected in carpal tunnel syndrome is the median nerve.

9. Which statement correctly lists the two agents commonly considered first-line disease-modifying therapies for relapsing MS?

- A. Interferon beta and glatiramer acetate**
- B. Ocrelizumab and fingolimod
- C. Rituximab and azathioprine
- D. Cyclophosphamide and methotrexate

First-line disease-modifying therapies for relapsing MS are those with a long track record of reducing relapses and new MRI activity while maintaining a favorable safety profile, used early in the disease course. Interferon beta and glatiramer acetate fit this role. They are immune-modulating injections that have been studied extensively and shown to lower relapse rates and slow lesion formation with manageable side effects (flu-like symptoms and injection-site reactions for interferon; well-tolerated injections for glatiramer). Because of their established safety and moderate, reliable efficacy, they are considered the standard initial options for many patients with relapsing MS. The other options involve therapies that are typically reserved for patients with higher disease activity, intolerance to first-line agents, or more aggressive disease. Ocrelizumab and fingolimod can be very effective but come with higher infection risks and monitoring needs, making them less likely as first-line in many guidelines. Rituximab and azathioprine are not standard first-line choices for relapsing MS, with azathioprine being broadly immunosuppressive and less supported by MS-specific data. Cyclophosphamide and methotrexate are more toxic and generally used in refractory or severe cases.

10. In the described treatment approach, which drug class is used to rapidly control ongoing seizures?

- A. Benzodiazepines**
- B. Barbiturates
- C. Antidepressants
- D. Antihistamines

Rapid termination of ongoing seizures relies on drugs that quickly boost inhibitory neurotransmission in the brain. Benzodiazepines do this by allosterically enhancing GABA-A receptor activity, increasing the frequency of chloride channel openings and thus speeding up neuronal inhibition. This produces a rapid anticonvulsant effect, making IV benzodiazepines (like lorazepam, diazepam, or midazolam) the first-line choice for acute seizure control, including status epilepticus. They act quickly and are effective at stopping ongoing convulsions, with later steps to prevent recurrence using longer-acting anticonvulsants. Barbiturates also enhance GABA but are generally reserved for refractory cases due to greater sedation and cardiorespiratory depression. Antidepressants and antihistamines do not provide the rapid anticonvulsant action needed to halt active seizures.

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!

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