

ABRET ELECTROENCEPHALOGRAPHY (EEG) 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. What is the most common etiology associated with LPDs/PLEDs?**
 - A. Ischemic stroke
 - B. Hemorrhagic stroke
 - C. Traumatic brain injury
 - D. Neurodegenerative disease
- 2. When does the onset of Sturge-Weber disease typically occur?**
 - A. In adulthood
 - B. During infancy
 - C. During adolescence
 - D. At birth
- 3. When the posterior background rhythm does not attenuate with eye opening, it is referred to as what?**
 - A. Alpha coma
 - B. Bankau phenomenon
 - C. Chronic encephalopathy
 - D. Postictal state
- 4. What do the terms proximal and distal refer to in medical terminology?**
 - A. Near to and far from
 - B. Upstream and downstream
 - C. Left and right
 - D. Superficial and deep
- 5. How does a normal EEG in adults aged 70 and older compare to younger adults?**
 - A. Similar characteristic patterns
 - B. Increased theta waves
 - C. REM sleep is less than 20% of total sleep time
 - D. Decreased alpha waves

- 6. Which artery provides the direct blood supply to the occipital lobe?**
- A. Middle cerebral artery
 - B. Anterior cerebral artery
 - C. Posterior cerebral artery
 - D. Vertebral artery
- 7. What type of aura is associated with Heschl's gyrus?**
- A. Visual aura
 - B. Auditory aura
 - C. Olfactory aura
 - D. Gustatory aura
- 8. Which type of tumor is least likely to cause epileptiform activity in EEG?**
- A. Meningioma
 - B. Pituitary adenoma
 - C. Glioblastoma
 - D. Astrocytoma
- 9. Photic stimulation is most effective in evoking epileptiform abnormalities in patients who have what?**
- A. Recent head trauma
 - B. A family history of seizures
 - C. Diabetes
 - D. Chronic headaches
- 10. What childhood disorder is characterized by acquired aphasia, multifocal epileptiform abnormalities, and focal or generalized seizures?**
- A. Landau-Kleffner syndrome
 - B. Apert syndrome
 - C. Fragile X syndrome
 - D. Down syndrome

Answers

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

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Explanations

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1. What is the most common etiology associated with LPDs/PLEDs?

- A. Ischemic stroke**
- B. Hemorrhagic stroke
- C. Traumatic brain injury
- D. Neurodegenerative disease

The most common etiology associated with lateralized periodic discharges (LPDs) or periodic lateralized epileptiform discharges (PLEDs) is ischemic stroke. These waveforms are often seen in the context of localized brain injury, particularly due to reduced blood flow that results from an ischemic event. When a region of the brain is deprived of oxygen and nutrients, such as during an ischemic stroke, cortical neurons may fire in a correlated manner, resulting in periodic discharges that can be detected on an EEG. This phenomenon occurs because the area affected by the ischemia may still generate electrical activity despite being compromised. The changes in neuronal excitability and the potential for the development of abnormal rhythmic activity lead to the presence of LPDs or PLEDs in these patients. Other conditions, such as hemorrhagic stroke, traumatic brain injury, and neurodegenerative disease, can also produce abnormal EEG patterns, but ischemic stroke is more frequently associated with LPDs/PLEDs specifically due to the nature of the injury and the resultant cortical excitability. Thus, when considering the most common etiology, ischemic stroke stands out as the primary cause linked to these EEG findings.

2. When does the onset of Sturge-Weber disease typically occur?

- A. In adulthood
- B. During infancy**
- C. During adolescence
- D. At birth

Sturge-Weber disease typically presents during infancy, which is significant because it is a neurocutaneous syndrome that is characterized by facial angiomas and neurological complications. The condition arises from a congenital malformation of blood vessels, often associated with a port-wine stain on the face. As affected individuals grow, they may experience neurological symptoms, including seizures, which can manifest in the first year of life. Early recognition and diagnosis are crucial for managing the complications associated with this condition. In contrast, the other age options, such as at birth, adulthood, or during adolescence, do not align with the typical clinical presentation, since symptoms often emerge as the child develops, making infancy the most appropriate phase for the onset of the disease.

3. When the posterior background rhythm does not attenuate with eye opening, it is referred to as what?

- A. Alpha coma
- B. Bankau phenomenon**
- C. Chronic encephalopathy
- D. Postictal state

When the posterior background rhythm does not attenuate with eye opening, it is referred to as the Bankau phenomenon. This phenomenon indicates a disruption in normal brain function, specifically regarding the usual response of the alpha rhythm. Under typical circumstances, eye opening would lead to a decrease in alpha wave activity, which is considered an important aspect of the brain's attentional and alertness mechanisms. When this attenuation does not occur, it can signal an underlying neurological issue, such as altered consciousness or significant brain dysfunction. The Bankau phenomenon specifically highlights how persistent posterior rhythmic activity in the presence of eye opening can suggest more severe conditions, as it deviates from the expected physiological response.

4. What do the terms proximal and distal refer to in medical terminology?

- A. Near to and far from**
- B. Upstream and downstream
- C. Left and right
- D. Superficial and deep

The terms proximal and distal are used in medical terminology to describe the relative locations of structures in the body, particularly in relation to a given reference point, typically the trunk or the center of the body. Proximal refers to a position that is nearer to the point of attachment or the trunk, while distal indicates a position that is farther away from that reference point. This language is crucial for accurately describing the location of injuries, diseases, or surgical procedures. For instance, when discussing the limbs, the shoulder is proximal to the elbow, as it is closer to the body's center, while the fingers are distal to the wrist, as they are farther away from the trunk. Understanding these terms is fundamental for effective communication in medical settings, as they provide a clear way to convey information about anatomical relationships. The context of the other options helps clarify why they do not align with the definitions of proximal and distal. "Upstream and downstream" describe movements or flows in systems like blood circulation rather than positions on the body. "Left and right" refer specifically to directional orientation rather than proximity. Similarly, "superficial and deep" describe the depth of structures rather than their relative distance from a reference point. Thus, the first option accurately captures the meaning.

5. How does a normal EEG in adults aged 70 and older compare to younger adults?

- A. Similar characteristic patterns
- B. Increased theta waves
- C. REM sleep is less than 20% of total sleep time**
- D. Decreased alpha waves

A normal EEG in adults aged 70 and older is characterized by various changes compared to younger adults, one of which includes REM sleep being less than 20% of total sleep time. As individuals age, there is a natural decline in the amount of time spent in REM sleep. This stage of sleep, which is crucial for memory consolidation and emotional regulation, tends to decrease with age, leading to shorter and less frequent REM periods during sleep cycles. In contrast, while some increases in theta waves and decreases in alpha waves might occur with advancing age, the particular highlight regarding REM sleep duration provides a clearer insight into sleep architecture changes that can be discerned through EEG assessments in older adults.

6. Which artery provides the direct blood supply to the occipital lobe?

- A. Middle cerebral artery
- B. Anterior cerebral artery
- C. Posterior cerebral artery**
- D. Vertebral artery

The posterior cerebral artery is the vessel that directly supplies blood to the occipital lobe of the brain. This artery branches off from the basilar artery and is primarily responsible for providing oxygenated blood to the areas of the brain involved in visual processing, which are primarily located in the occipital lobe. Proper blood supply to the occipital lobe is essential for visual perception and various visual processing activities. The posterior cerebral artery also supplies parts of the temporal lobe and is critical in maintaining the overall function of these areas. Understanding the vascular supply is vital in clinical settings, as occlusions or abnormalities in the posterior cerebral artery can lead to specific deficits, such as visual field cuts or other visual disturbances.

7. What type of aura is associated with Heschl's gyrus?

- A. Visual aura
- B. Auditory aura**
- C. Olfactory aura
- D. Gustatory aura

Heschl's gyrus, which is located in the superior temporal gyrus of the brain, is primarily associated with auditory processing. It plays a critical role in the perception of sound and is integral for the interpretation of auditory stimuli. An auditory aura is characterized by sensations related to hearing, such as ringing sounds or music, which can be precursors to a seizure. Since Heschl's gyrus is directly involved in auditory functions, an auditory aura is the most appropriate answer in this context. This connection explains why disturbances or abnormal activities related to this region might manifest as auditory experiences in individuals.

8. Which type of tumor is least likely to cause epileptiform activity in EEG?

- A. Meningioma
- B. Pituitary adenoma**
- C. Glioblastoma
- D. Astrocytoma

Pituitary adenomas are typically considered the least likely to cause epileptiform activity in EEG recordings. The reason for this stems from their location and the nature of these tumors. Pituitary adenomas are located in the sella turcica at the base of the skull and primarily affect the pituitary gland, which is not directly associated with the cortex or the structures that generate cortical electrical activity. Because they often don't invade adjacent brain tissue or produce physical irritation or disruption to surrounding neuronal pathways, the likelihood of them causing seizures or epileptiform discharges on EEG is lower compared to other tumor types. In contrast, glioblastomas and astrocytomas are types of brain tumors that arise from glial cells and are more invasive, infiltrating nearby brain tissue. This invasive nature leads to cortical irritation, which can manifest as epileptiform activity on an EEG. Meningiomas, while often extra-axial and arising from the meninges, can also lead to seizures due to their location and potential to exert mass effects on the brain tissue, even if they do not directly invade it. Therefore, while various factors can influence seizure activity in relation to tumors, the pituitary adenoma stands out as the least likely to produce epilept

9. Photic stimulation is most effective in evoking epileptiform abnormalities in patients who have what?

- A. Recent head trauma
- B. A family history of seizures**
- C. Diabetes
- D. Chronic headaches

Photic stimulation is particularly effective in evoking epileptiform abnormalities, especially in individuals with a family history of seizures. This effectiveness is largely attributed to the genetic predisposition that often accompanies a family history of epilepsy, making these patients more sensitive to stimuli that may provoke seizures. In such individuals, the brain's cortical excitability is heightened, resulting in a greater likelihood of abnormal electrical activity when subjected to photic stimuli. Patients with a family history of seizures may exhibit heightened sensitivity or a lower threshold for seizure activity, meaning that visual stimuli, like flashing lights, can trigger epileptic responses that might not be present in those without such a familial background. This background suggests a genetic component to their seizure activity, which can influence how their brain responds to external stimuli. In contrast, recent head trauma, diabetes, and chronic headaches do not inherently increase the likelihood of photic stimulation evoking epileptiform abnormalities to the same degree. While these conditions can lead to neurological issues, they do not carry the same strong probabilistic correlation with sensitivity to photic stimuli as a family history of seizures does. Therefore, patients with a family history of seizures are the most likely group to demonstrate significant electrophysiological changes in response to photic stimulation during an EEG.

10. What childhood disorder is characterized by acquired aphasia, multifocal epileptiform abnormalities, and focal or generalized seizures?

- A. Landau-Kleffner syndrome**
- B. Apert syndrome
- C. Fragile X syndrome
- D. Down syndrome

Landau-Kleffner syndrome is a rare childhood disorder that typically emerges between the ages of 3 and 7 years. It is primarily characterized by acquired aphasia, which is a loss of language abilities, and it often coincides with the onset of seizures, which can be focal or generalized in nature. The multifocal epileptiform abnormalities observed in EEG readings, such as spikes or sharp waves, further distinguish this syndrome. This combination of symptoms—language regression, seizures, and specific EEG patterns—makes Landau-Kleffner syndrome unique compared to other developmental disorders. In contrast, the other disorders mentioned do not share these specific features. Apert syndrome is a genetic condition affecting development and is characterized by craniosynostosis and syndactyly but does not typically involve aphasia or seizures. Fragile X syndrome is primarily a genetic disorder that leads to intellectual disability and behavioral challenges, but it is not defined by acquired language loss or seizure activity. Similarly, Down syndrome is a genetic disorder associated with intellectual disability and physical characteristics, but it does not include the specific combination of acquired aphasia and multifocal epileptiform activity seen in Landau-Kleffner syndrome.

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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