

Neuropsychology Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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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 imaging technique uses magnetic fields and radio waves to produce computer-generated images that distinguish among soft tissues?**
 - A. MRI**
 - B. Angiography**
 - C. PET Scan**
 - D. EEG**

- 2. Which concept historically linked skull shape to personality and is not supported by modern science?**
 - A. EEG**
 - B. MRI**
 - C. PET Scan**
 - D. Phrenology**

- 3. In neuroanatomy, a horizontal section is defined as a cut at right angles to the midline that divides the body into which portions?**
 - A. A cut parallel to the midline dividing the body into anterior and posterior portions.**
 - B. A cut at right angles to the midline and dividing the body into superior and inferior portions.**
 - C. A cut that divides the body into left and right halves.**
 - D. A cut along the front-to-back axis.**

- 4. Which term refers to the bumps on the surface of the brain?**
 - A. Sulci**
 - B. Fissures**
 - C. Gyri**
 - D. Cortex**

- 5. Which term is another word for Bottom?**
 - A. Rostral**
 - B. Caudal**
 - C. Medial**
 - D. Ventral (inferior)**

- 6. Which imaging modality uses gamma-emitting isotopes to measure regional perfusion and activity in tissues?**
- A. MRI**
 - B. Angiography**
 - C. Single Photon Emission Computed Tomography**
 - D. EEG**
- 7. Which Brodmann areas comprise the dorsolateral prefrontal cortex?**
- A. BA 41, 42**
 - B. BA 46, 9**
 - C. BA 17**
 - D. BA 4**
- 8. Brodmann area 45 corresponds to which region?**
- A. Pars opercularis**
 - B. Pars triangularis**
 - C. Angular gyrus**
 - D. Supramarginal gyrus**
- 9. Which structure is involved in learning, memory, and emotion?**
- A. Hypothalamus**
 - B. Cerebellum**
 - C. Hippocampus**
 - D. Thalamus**
- 10. Brodmann area 40 corresponds to which gyrus?**
- A. Angular gyrus**
 - B. Supramarginal gyrus**
 - C. Pars opercularis**
 - D. Primary visual area**

Answers

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

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Explanations

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1. Which imaging technique uses magnetic fields and radio waves to produce computer-generated images that distinguish among soft tissues?

A. MRI

B. Angiography

C. PET Scan

D. EEG

Magnetic resonance imaging relies on strong magnetic fields and radiofrequency pulses to probe the body's hydrogen protons. When you place the body in a powerful magnet, these protons align with the field. A radiofrequency pulse perturbs them, and as they return to alignment, they emit signals that the scanner converts into detailed images. Differences in how quickly protons relax (their T1 and T2 properties) and in proton density create contrast between soft tissues, so brain, spinal cord, muscles, and other structures appear with clear, distinct borders. Because it doesn't use ionizing radiation, MRI is especially valued for high-resolution images of soft tissue. In contrast, angiography visualizes blood vessels using X-rays and usually a contrast dye; PET scans map metabolic activity using radioactive tracers; EEG measures electrical activity of the brain rather than anatomy.

2. Which concept historically linked skull shape to personality and is not supported by modern science?

A. EEG

B. MRI

C. PET Scan

D. Phrenology

Phrenology teaches that bumps and shapes on the skull reflect personality and mental abilities. It rose in the 19th century as a method to read character by feeling the skull and matching bumps to supposed faculties. Modern science rejects this idea because there isn't a reliable, consistent link between skull morphology and personality. The brain itself, its structures, and how it functions determine behavior, not skull contours. People with similar skull shapes can differ greatly in traits, and those with different shapes can share many abilities—undermining any claims that skull form predicts personality. What the body of neuroscience actually uses are real brain-measuring tools. EEG tracks electrical activity of the brain and is useful for understanding timing of neural processes and diagnosing events like seizures. MRI gives detailed images of brain anatomy, showing structure, while PET reveals metabolic activity to study function. These methods advance our understanding of the brain without making unsupported leaps from skull shape to personality.

3. In neuroanatomy, a horizontal section is defined as a cut at right angles to the midline that divides the body into which portions?

A. A cut parallel to the midline dividing the body into anterior and posterior portions.

B. A cut at right angles to the midline and dividing the body into superior and inferior portions.

C. A cut that divides the body into left and right halves.

D. A cut along the front-to-back axis.

Think about how planes are positioned relative to the body's long axis. A horizontal (transverse) section runs across the body and is perpendicular to that long axis, so it slices the brain into an upper part and a lower part. That means the resulting pieces are described as superior and inferior portions. The other described orientations would cut to separate front from back or left from right, not top from bottom. So the option defining a cut at right angles to the midline that yields superior and inferior parts best matches a horizontal/transverse plane.

4. Which term refers to the bumps on the surface of the brain?

A. Sulci

B. Fissures

C. Gyri

D. Cortex

Bumps on the brain's surface are called gyri, the raised ridges that stand above the grooves between them. Sulci are those shallow grooves that separate gyri, while fissures are deeper grooves that divide larger regions. The cortex refers to the outer gray matter layer, not the bumps themselves. So the term for the bumps is gyri.

5. Which term is another word for Bottom?

A. Rostral

B. Caudal

C. Medial

D. Ventral (inferior)

In neuroanatomy, directional terms describe orientation relative to the brain and spinal cord. The ventral side is the bottom or inferior surface, especially when considering structures on the underside of the brain or spinal cord. So bottom aligns with ventral (inferior) because it designates the lower, belly-side surface. The other terms point to different directions: rostral is toward the nose, caudal toward the tail (or feet in humans), and medial toward the midline. Thus ventral (inferior) best fits the idea of the bottom.

6. Which imaging modality uses gamma-emitting isotopes to measure regional perfusion and activity in tissues?

A. MRI

B. Angiography

C. Single Photon Emission Computed Tomography

D. EEG

This question targets functional nuclear imaging that uses gamma-emitting radiotracers to map how blood flows through and how tissues are functioning in different regions. In this approach, a patient receives a tracer that releases gamma photons. A gamma camera detects these photons from multiple angles as the patient is rotated, and the data are reconstructed into a three-dimensional map of tracer distribution. That distribution reflects regional perfusion or metabolic/activity differences in tissues, allowing clinicians to see areas of reduced or enhanced activity. This is distinct from MRI, which relies on magnetic fields and radio waves to create anatomical or functional images without gamma emission. Angiography uses X-ray-visible contrast to image blood vessels rather than tissue perfusion via gamma signals. EEG records electrical activity directly from neurons on the scalp rather than producing tissue images.

7. Which Brodmann areas comprise the dorsolateral prefrontal cortex?

A. BA 41, 42

B. BA 46, 9

C. BA 17

D. BA 4

Executive control and working memory are housed in the dorsolateral prefrontal cortex, located on the lateral surface of the frontal lobe in the dorsal and lateral parts of the middle and superior frontal gyri. These areas are repeatedly linked to planning, cognitive flexibility, and the ability to hold and manipulate information. The other options point to regions outside this area: primary auditory cortex sits in the temporal lobe, primary visual cortex in the occipital lobe, and primary motor cortex in the precentral gyrus. Those regions are involved in basic perception or movement rather than the high-level control processes of the dorsolateral prefrontal cortex. So the described lateral, dorsal frontal regions best fit the dorsolateral prefrontal cortex.

8. Brodmann area 45 corresponds to which region?

A. Pars opercularis

B. Pars triangularis

C. Angular gyrus

D. Supramarginal gyrus

Brodmann area 45 is defined by its cellular structure and where it sits in the frontal lobe. It lies in the inferior frontal gyrus, specifically in the middle subdivision called the pars triangularis. This region sits between the posterior pars opercularis (BA44) and the anterior pars orbitalis (BA47). The other regions mentioned belong to different lobes or different subdivisions: the angular gyrus and supramarginal gyrus are in the parietal lobe (not the inferior frontal gyrus), and the pars opercularis corresponds to BA44, not BA45. So the correct region for area 45 is the pars triangularis.

9. Which structure is involved in learning, memory, and emotion?

- A. Hypothalamus**
- B. Cerebellum**
- C. Hippocampus**
- D. Thalamus**

Learning, memory, and emotion intersect in the hippocampus, a key structure of the limbic system in the medial temporal lobe. It is essential for forming new memories and for converting short-term experiences into long-term, consciously retrievable memories, especially declarative ones. The hippocampus supports learning by encoding contextual and spatial information that lets you relate different elements of an experience. Emotions influence how strongly memories are stored through interactions with the amygdala, so emotionally charged events are often remembered more vividly because the amygdala modulates hippocampal encoding. The hypothalamus focuses on basic drives and hormonal regulation, the thalamus acts mainly as a relay for sensory information, and the cerebellum governs motor coordination and procedural learning, making them less central to the combined roles of learning, memory, and emotion.

10. Brodmann area 40 corresponds to which gyrus?

- A. Angular gyrus**
- B. Supramarginal gyrus**
- C. Pars opercularis**
- D. Primary visual area**

Brodmann area 40 is located in the inferior parietal lobule and corresponds to the supramarginal gyrus, which curves around the posterior end of the Sylvian (lateral) fissure. This makes it the parietal region you're looking for when matching BA numbers to gyri. The angular gyrus, by contrast, is Brodmann area 39 and sits just posterior to the supramarginal gyrus. The pars opercularis is part of the frontal lobe (inferior frontal gyrus, around Brodmann area 44/45), and the primary visual area is Brodmann area 17 in the occipital lobe. So the supramarginal gyrus is the correct match for Brodmann area 40.

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://neuropsychology.examzify.com>

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

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