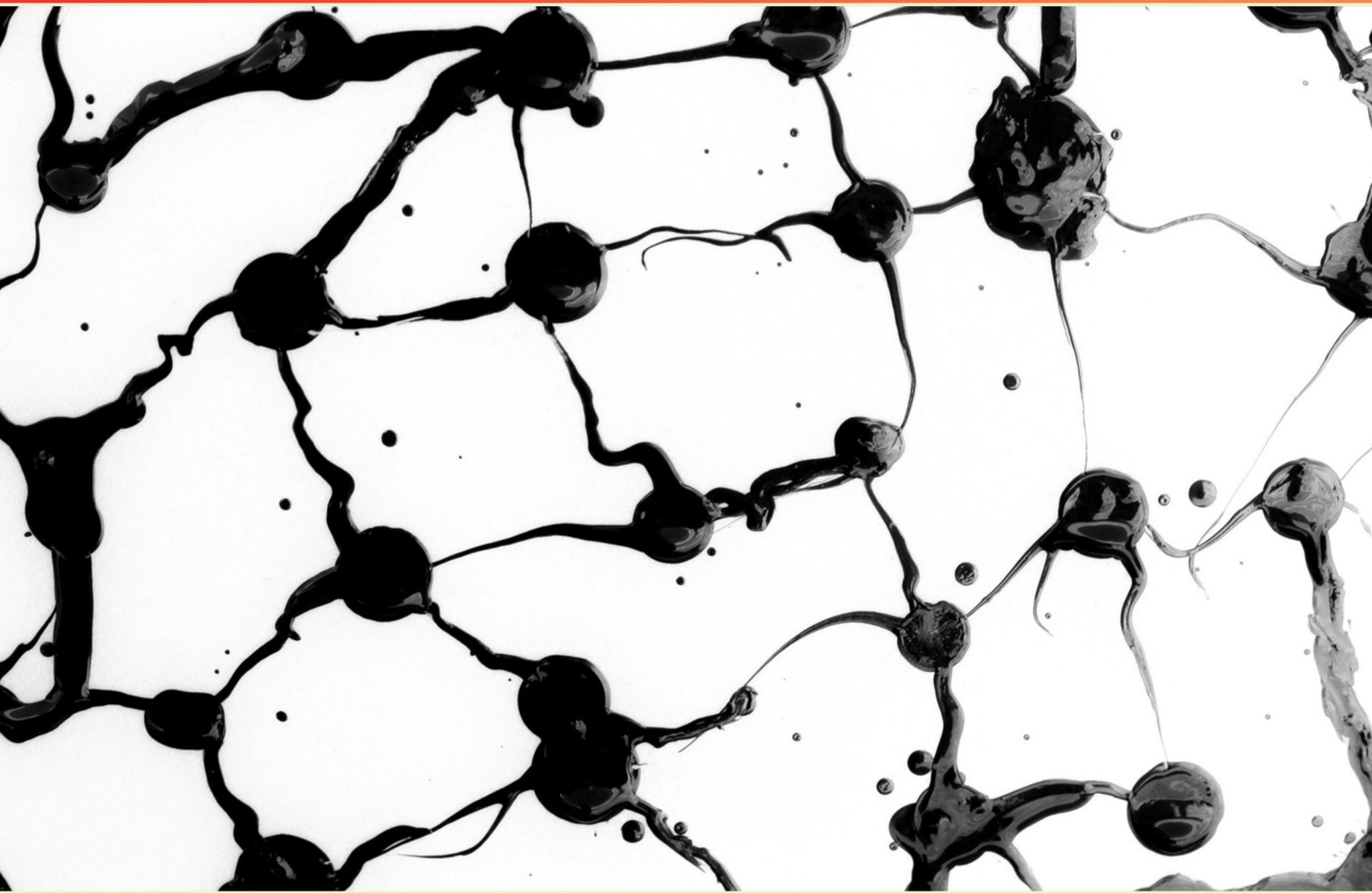


AP PSYCHOLOGY – BIOLOGICAL BASES OF BEHAVIOR PRACTICE TEST (SAMPLE) STUDY GUIDE



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

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- 1. What does an EEG record?**
 - A. Brain activity identified by magnetic fields
 - B. Brain activity as waves based on rhythmic activity
 - C. Blood flow and brain function
 - D. Imagery of soft tissue
- 2. What term refers to the creation of new neurons in the adult brain?**
 - A. Neuroplasticity
 - B. Neurogenesis
 - C. Neurotransmission
 - D. Neuromodulation
- 3. Which of the following best describes the role of genes?**
 - A. They provide a blueprint for the organism's entire body.
 - B. They are responsible solely for physical traits.
 - C. They are completely independent of environmental factors.
 - D. They only function during reproduction.
- 4. Which brain imaging technique provides insights into both structure and function?**
 - A. MRI
 - B. CT scan
 - C. fMRI
 - D. PET
- 5. Which type of molecule binds to a receptor site and stimulates a response in the cell?**
 - A. Antagonist
 - B. Agonist
 - C. Inhibitor
 - D. Receptor blocker

- 6. Which structure is involved in emotion and the endocrine system regulation?**
- A. Thalamus
 - B. Hippocampus
 - C. Hypothalamus
 - D. Reticular formation
- 7. What phenomenon describes increased amounts of REM sleep following deprivation?**
- A. REM rebound
 - B. Dream rebound
 - C. Sleep debt
 - D. Cycles of sleep
- 8. Which type of vision does the fovea primarily support due to its concentration of cones?**
- A. Peripheral vision
 - B. Monochromatic vision
 - C. Color vision
 - D. Low-light vision
- 9. What term describes the debate about whether genetics or environment primarily influences behavior?**
- A. Nature vs. Nurture
 - B. Genotype vs. Phenotype
 - C. Nature vs. Nature
 - D. Heredity vs. Environment
- 10. What refers to the distance from the peak of one light or sound wave to the peak of the next?**
- A. Amplitude
 - B. Wavelength
 - C. Frequency
 - D. Intensity

Answers

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

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Explanations

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1. What does an EEG record?

- A. Brain activity identified by magnetic fields
- B. Brain activity as waves based on rhythmic activity**
- C. Blood flow and brain function
- D. Imagery of soft tissue

An EEG, or electroencephalogram, records brain activity by measuring electrical activity along the scalp. This activity is represented as waves, which correspond to the rhythmic patterns of neural oscillations occurring in different regions of the brain. Each wave reflects different states of consciousness or cognitive processes, such as sleep, relaxation, and alertness. The strength and frequency of these waves can provide valuable insights into how the brain functions during various activities or in response to different stimuli. For example, alpha waves typically indicate a person is relaxed yet alert, while delta waves are associated with deep sleep. This ability to represent brain activity in waveforms is what distinguishes the EEG from other methods of studying brain function.

2. What term refers to the creation of new neurons in the adult brain?

- A. Neuroplasticity
- B. Neurogenesis**
- C. Neurotransmission
- D. Neuromodulation

The term that refers to the creation of new neurons in the adult brain is neurogenesis. This process has been shown to occur primarily in specific regions of the brain, such as the hippocampus, which is involved in memory and learning. Neurogenesis is significant as it demonstrates that the adult brain is capable of some degree of regeneration and adaptation, which contrasts with previous beliefs that neurogenesis only occurred during developmental stages. Neuroplasticity, while related, refers more broadly to the brain's ability to reorganize itself by forming new neural connections in response to learning or injury. This includes not only the growth of new neurons but also changes in the strength or number of synaptic connections between existing neurons. Neurotransmission refers to the process by which signaling molecules (neurotransmitters) are released by neurons and transmitted across synapses to communicate with other neurons, which does not involve the creation of new neurons. Neuromodulation involves the alteration of neuronal signaling properties by neurotransmitters or hormones but does not pertain to the generation of new neurons. Thus, neurogenesis specifically addresses the formation of new neurons, making it the correct answer.

3. Which of the following best describes the role of genes?

- A. They provide a blueprint for the organism's entire body.
- B. They are responsible solely for physical traits.
- C. They are completely independent of environmental factors.
- D. They only function during reproduction.

The selection of 'A' as the correct answer highlights the multifaceted role that genes play in the development and functioning of an organism. Genes indeed serve as blueprints, guiding the formation of bodily structures, influencing the development of various systems, and even determining certain behavioral traits. This blueprint aspect reflects the way genes encode the information necessary for creating proteins, which are crucial for building cells and tissues, and thus for the overall organization and operation of the organism's body. Unlike the assertion that genes are solely responsible for physical traits, which is an overly simplistic view, genes also contribute to a wide range of characteristics, including psychological traits and predispositions to certain behaviors or mental health conditions. Environmental factors interact extensively with genetic information, shaping how traits are expressed, meaning that genes do not operate in isolation. The idea that genes are completely independent of environmental factors ignores the established concept of epigenetics, which describes how external factors can influence gene expression. Lastly, the notion that genes only function during reproduction fails to acknowledge that genes are actively involved throughout the organism's lifetime, influencing growth, maintenance, and repair processes after reproduction has occurred. Thus, understanding the role of genes as a comprehensive blueprint encapsulates their importance in both the physical and functional aspects of living

4. Which brain imaging technique provides insights into both structure and function?

- A. MRI
- B. CT scan
- C. fMRI
- D. PET

The technique that provides insights into both the structure and function of the brain is functional magnetic resonance imaging, commonly known as fMRI. This imaging method measures brain activity by detecting changes in blood flow. When a specific area of the brain is more active, it requires more oxygen, and fMRI can identify these changes in real-time, allowing for functional observations during various tasks or stimuli. Additionally, fMRI also captures structural images of the brain, much like standard MRI, which shows detailed pictures of brain anatomy. This dual capability makes fMRI particularly valuable in research and clinical settings because it helps to correlate brain structure with brain function, offering a comprehensive view of how different parts of the brain interact and relate to behaviors or cognitive processes. Other imaging methods like MRI and CT scans primarily focus on structural details without providing real-time functional insights. PET scans can measure brain activity by using radioactive tracers but do not provide the same level of structural detail that fMRI does.

5. Which type of molecule binds to a receptor site and stimulates a response in the cell?

- A. Antagonist
- B. Agonist**
- C. Inhibitor
- D. Receptor blocker

The correct answer is indeed the agonist. An agonist is a type of molecule that binds to a receptor and activates it, leading to a physiological response in the cell. This interaction mimics the action of a naturally occurring substance, such as a neurotransmitter or hormone, enhancing the signaling process. By binding to the receptor site, the agonist effectively stimulates the cell's activity and promotes a specific response, which can result in various effects depending on the type of receptor and the system in which it operates. In contrast, antagonists are molecules that also bind to receptors but block or dampen the agonist-induced response. Inhibitors are more specific to enzyme activity, reducing the rate of reactions rather than stimulating receptor sites. Receptor blockers, a term often used interchangeably with antagonists, refer specifically to molecules that prevent the normal action of the receptor. Thus, agonists are the key players in promoting cellular responses, while the other choices serve roles in inhibiting or blocking those responses.

6. Which structure is involved in emotion and the endocrine system regulation?

- A. Thalamus
- B. Hippocampus
- C. Hypothalamus**
- D. Reticular formation

The hypothalamus is a crucial structure involved in both emotion regulation and the endocrine system. It serves as a link between the nervous system and the endocrine system, controlling the release of hormones from the pituitary gland, which in turn regulates various bodily functions including stress response, temperature regulation, and hunger. In terms of emotion, the hypothalamus is part of the limbic system, which plays a vital role in the expression and experience of emotions. It helps to coordinate emotional responses by influencing physiological reactions such as heart rate and arousal, which are linked to feelings like fear or excitement. While the thalamus primarily processes sensory information, the hippocampus is mainly associated with memory formation, and the reticular formation is involved in alertness and arousal. None of these structures integrate emotional responses with endocrine functions to the extent that the hypothalamus does. This makes the hypothalamus the correct answer in this context.

7. What phenomenon describes increased amounts of REM sleep following deprivation?

- A. REM rebound**
- B. Dream rebound
- C. Sleep debt
- D. Cycles of sleep

The correct answer is REM rebound, which refers to the phenomenon in which the body compensates for lost REM sleep by increasing the amount of REM sleep in subsequent sleep cycles. This typically occurs after a period of deprivation when an individual has been deprived of sleep, particularly REM sleep, due to various factors such as stress, sleep disorders, or disruptions in sleep patterns. During a normal sleep cycle, the body goes through different stages, including rapid eye movement (REM) sleep, which is crucial for cognitive functions like memory, learning, and emotional regulation. When an individual is deprived of REM sleep, the brain attempts to restore this important phase by allowing longer and more frequent periods of REM sleep in following nights to catch up on what was missed. This rebound effect highlights the body's intrinsic mechanisms to maintain homeostasis in sleep architecture. The other options, while related to sleep and its effects, do not specifically address the phenomenon of increased REM sleep following deprivation. For instance, "dream rebound" doesn't refer to a physiological process affecting sleep duration or architecture, and "sleep debt" generally describes a cumulative deficit of sleep rather than a specific increase in REM. "Cycles of sleep" simply refer to the various stages the body goes through during sleep but does not encapsulate the

8. Which type of vision does the fovea primarily support due to its concentration of cones?

- A. Peripheral vision
- B. Monochromatic vision
- C. Color vision**
- D. Low-light vision

The fovea is a specialized region of the retina that contains a high concentration of cones, which are the photoreceptor cells responsible for detecting color and fine detail. Because of this unique structure, the fovea is primarily involved in color vision. Cones are highly sensitive to different wavelengths of light, allowing them to respond to the three primary colors: red, green, and blue. This sensitivity is crucial for perceiving a wide range of colors and for tasks that require sharp vision, such as reading and recognizing faces. In contrast, peripheral vision is largely supported by rod cells, which are more sensitive to dim light and motion but do not provide color discrimination. Monochromatic vision, which involves perceiving only a single color or shades of gray, is not facilitated by the fovea, as it primarily operates through the cones that support color perception. Low-light vision relies on rod cells, which are more concentrated in the peripheral regions of the retina and enable vision in dim conditions rather than the bright, detailed vision supported by the fovea. Thus, the correct association is that the fovea supports color vision due to its abundance of cone cells.

9. What term describes the debate about whether genetics or environment primarily influences behavior?

A. Nature vs. Nurture

B. Genotype vs. Phenotype

C. Nature vs. Nature

D. Heredity vs. Environment

The term that best encapsulates the debate about the extent to which genetics and environmental factors influence behavior is "Nature vs. Nurture." This concept addresses the relative contributions of inherited biological predispositions (nature) versus environmental experiences and changes (nurture) in shaping human behaviors, personality, and developmental outcomes. The nature aspect refers to the genetic endowments individuals are born with, while the nurture aspect encompasses all external influences such as upbringing, culture, and personal experiences that can impact a person's development. The other terms listed don't adequately capture the broad scope of this debate. "Genotype vs. Phenotype" specifically focuses on the difference between an organism's genetic makeup (genotype) and its observable characteristics (phenotype), which is a subset of the larger nature vs. nurture debate. "Nature vs. Nature" seems to be a typographical error and does not represent a recognized debate in psychology. "Heredity vs. Environment" is closely related to the nature vs. nurture discussion but is not as widely recognized as the more commonly used term. Thus, "Nature vs. Nurture" effectively summarizes the ongoing dialogue in psychology regarding the influence of genetic and environmental factors on behavior.

10. What refers to the distance from the peak of one light or sound wave to the peak of the next?

A. Amplitude

B. Wavelength

C. Frequency

D. Intensity

The term that refers to the distance from the peak of one light or sound wave to the peak of the next is wavelength. Wavelength is a critical concept in both physics and psychology, specifically in understanding how we perceive different forms of energy, such as light and sound. In the context of light waves, for instance, the wavelength determines the color of the light. Shorter wavelengths correspond to colors like violet and blue, while longer wavelengths correspond to reds and oranges. In sound waves, the wavelength is related to the pitch we hear; shorter wavelengths produce higher pitches, and longer wavelengths yield lower pitches. This concept is foundational in the study of waves, impacting how various phenomena are understood in psychological processes related to perception. Understanding wavelength can help explain the differences in sensory experiences, such as how we perceive colors in visual stimuli or musical notes in auditory stimuli.

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://appsychbiobasesofbehavior.examzify.com>

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

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