AP Psychology – Biological Bases of Behavior 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. Don't worry about getting everything right, 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, and take breaks to retain information better.

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.

7. Use Other Tools

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 term describes the colored portion of the eye that surrounds the pupil?

A. Cornea

B. Lens

C. Iris

D. Pupil

2. Which part of the nervous system consists of the brain and spinal cord?

A. Peripheral nervous system

B. Central nervous system

C. Autonomic nervous system

D. Somatic nervous system

3. 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

4. Which component of the autonomic nervous system helps the body return to a normal resting state?

A. Parasympathetic nervous system

B. Sympathetic nervous system

C. Central nervous system

D. Peripheral nervous system

5. What aspect of vision is primarily impacted in low-light conditions?

A. Color sensation

B. Fine detail perception

C. Brightness sensitivity

D. Contrast sensitivity

6. What do we call twins that develop from a single fertilized egg that splits in two?

A. Fraternal Twins

B. Identical (Monozygotic) Twins

C. Conjoint Twins

D. Half-Siblings

7. Which neurotransmitter is involved in the body's fight or flight response and increases heart rate?

A. Epinephrine

B. Dopamine

C. Substance P

D. Endorphins

8. What term describes quiet, typically dreamless sleep without rapid eye movements, divided into four stages?

A. NREM sleep

B. Deep sleep

C. Hypnagogic sleep

D. REM sleep

9. Which neurotransmitter is primarily associated with movement, attention, learning, and reward systems in the brain?

A. Dopamine

B. Serotonin

C. Acetylcholine

D. Endorphins

10. Which brain psychological phenomenon occurs when an individual experiences sensations without an external cause?

A. Hallucinations

B. Hypnagogic sensations

C. Awakening response

D. Charismatic experiences

Answers

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

Explanations

1. What term describes the colored portion of the eye that surrounds the pupil?

A. Cornea

B. Lens

C. Iris

D. Pupil

The term that describes the colored portion of the eye that surrounds the pupil is the iris. The iris is a muscular structure that not only gives the eye its color but also regulates the size of the pupil, thus controlling the amount of light that enters the eye. This function is crucial for adjusting vision in different lighting conditions, allowing for better sight in both bright and dim environments. The other terms refer to different parts of the eye. The cornea is the transparent front layer of the eye that helps to focus light. The lens is located behind the iris and further aids in focusing light onto the retina. The pupil, on the other hand, is the opening in the center of the iris that allows light to enter the eye. Understanding these components helps clarify how the eye functions as a whole in facilitating vision.

2. Which part of the nervous system consists of the brain and spinal cord?

A. Peripheral nervous system

B. Central nervous system

C. Autonomic nervous system

D. Somatic nervous system

The central nervous system is the part of the nervous system that includes both the brain and the spinal cord. This system serves as the main control center for processing information and dictating responses throughout the body. It plays a vital role in integrating sensory information, coordinating motor functions, and managing higher cognitive functions like thinking and problem-solving. In contrast, the peripheral nervous system encompasses all nerve pathways outside the brain and spinal cord, which connect the central nervous system to limbs and organs. The autonomic nervous system, a subdivision of the peripheral nervous system, regulates involuntary functions such as heart rate and digestion, while the somatic nervous system controls voluntary movements and transmits sensory information to the central nervous system. Thus, the central nervous system's composition of the brain and spinal cord distinguishes it as the key hub for processing and responding to information, making it the correct answer in this context.

3. 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.

4. Which component of the autonomic nervous system helps the body return to a normal resting state?

A. Parasympathetic nervous system

B. Sympathetic nervous system

C. Central nervous system

D. Peripheral nervous system

The parasympathetic nervous system is essential for helping the body return to a normal resting state after a period of heightened activity or stress. This component of the autonomic nervous system focuses on conserving energy and promoting relaxation. It slows the heart rate, decreases blood pressure, and stimulates digestion, allowing the body to repair and restore itself. During stressful situations, the sympathetic nervous system activates the "fight or flight" response, mobilizing energy and increasing alertness. Once the stressful event has passed, the parasympathetic nervous system kicks in to counterbalance these effects, ensuring that the body can recover and maintain homeostasis. Understanding the role of the parasympathetic nervous system is fundamental in psychology, particularly in discussions around stress management and physiological responses to emotional stimuli.

5. What aspect of vision is primarily impacted in low-light conditions?

A. Color sensation

B. Fine detail perception

C. Brightness sensitivity

D. Contrast sensitivity

In low-light conditions, the ability to perceive brightness is notably diminished, leading to challenges with color sensation. This is primarily because color vision relies on cone cells in the retina, which are less effective in dim light. Instead, rod cells, which are more sensitive to low light levels, primarily take over, but they do not provide information about color. In situations of reduced illumination, our visual system experiences a shift away from vibrant color recognition towards shades of gray and less distinctive color differentiation. As light conditions decrease, color sensitivity declines, making it difficult for the human eye to perceive different hues. This highlights why color sensation is primarily impacted in low-light situations, as the reliance on rods over cones results in a loss of vibrant color information.

6. What do we call twins that develop from a single fertilized egg that splits in two?

A. Fraternal Twins

B. Identical (Monozygotic) Twins

C. Conjoint Twins

D. Half-Siblings

The term used to describe twins that develop from a single fertilized egg that splits into two embryos is "Identical (Monozygotic) Twins." This occurs when a single zygote, formed from one egg and one sperm, divides and forms two genetically identical individuals. Because they originated from the same fertilized egg, these twins share the same genetic material, leading to very similar physical characteristics and, in many cases, psychological traits. In contrast, fraternal twins are the result of two separate eggs being fertilized by two separate sperm, leading to genetically distinct siblings. This explains why they do not have the same level of genetic similarity as identical twins. The other answer choices, such as conjoint twins and half-siblings, refer to entirely different concepts in reproductive biology and familial relations. Conjoint twins, for instance, are twins that are physically connected and typically result from incomplete splitting of the embryo, while half-siblings share only one parent genetically. Therefore, the definition of identical twins aligns perfectly with the concept of monozygotic development.

7. Which neurotransmitter is involved in the body's fight or flight response and increases heart rate?

A. Epinephrine

B. Dopamine

C. Substance P

D. Endorphins

Epinephrine, also known as adrenaline, plays a crucial role in the body's fight-or-flight response. This neurotransmitter is secreted by the adrenal glands when a person perceives a threat. Its primary function in this context is to prepare the body to either confront or escape from the source of danger. Epinephrine has several physiological effects, one of which is the increase of heart rate. This is part of a broader suite of changes that enhance physical performance and readiness during stressful situations, including the dilation of air passages in the lungs, increased blood flow to muscles, and the release of energy stores. By elevating heart rate, epinephrine ensures that more oxygen and nutrients are delivered to vital organs and muscle tissues, thereby improving the body's ability to respond quickly and effectively to perceived threats. In contrast, other neurotransmitters listed, such as dopamine, play key roles in reward and pleasure pathways; substance P is associated with pain perception, and endorphins primarily function to alleviate pain and induce feelings of pleasure. None of these neurotransmitters directly contribute to the fight-or-flight response like epinephrine does.

8. What term describes quiet, typically dreamless sleep without rapid eye movements, divided into four stages?

A. NREM sleep

B. Deep sleep

C. Hypnagogic sleep

D. REM sleep

NREM sleep, or Non-Rapid Eye Movement sleep, is the correct term for the type of sleep described in the question. This phase of sleep is characterized by the absence of rapid eye movements and is typically associated with deep, restorative sleep. It is divided into four distinct stages, ranging from light sleep (Stage 1) to deep sleep (Stage 4), with each stage playing a crucial role in overall sleep quality and health. During NREM sleep, especially in the deeper stages, various physiological changes occur, such as a decrease in heart rate, blood pressure, and breathing rate. This contributes to physical restoration and immune functioning. The dreamless quality of NREM sleep, particularly in the deeper stages, helps differentiate it from REM sleep, where most vivid dreaming occurs and eye movements are present. The other terms listed refer to different aspects of sleep. Deep sleep often refers to the lower stages of NREM sleep but does not encompass all four stages as a whole. Hypnagogic sleep is a transitional state occurring between wakefulness and sleep and is not specifically a sleep stage. REM sleep, distinct from NREM sleep, is marked by rapid eye movements and heightened brain activity, often associated with vivid dreams.

9. Which neurotransmitter is primarily associated with movement, attention, learning, and reward systems in the brain?

A. Dopamine

B. Serotonin

C. Acetylcholine

D. Endorphins

Dopamine is the neurotransmitter primarily associated with movement, attention, learning, and reward systems in the brain. It plays a critical role in several key brain functions, including the coordination of motor activity. For instance, deficiencies in dopamine are closely linked to Parkinson's disease, which is characterized by motor control issues. Additionally, dopamine is crucial in the brain's reward pathways, where it reinforces pleasurable sensations, helping to motivate behaviors that are essential for survival, such as eating and reproduction. This role in reward also integrates with learning processes, as dopamine influences the reinforcement of behaviors through reward feedback. Thus, its impact extends beyond simple movement control to encompass cognitive functions such as learning and attention, where variations in dopamine levels can affect how we process information and stay focused. In contrast, other neurotransmitters like serotonin primarily regulate mood and emotional states; acetylcholine is involved in muscle contraction and certain cognitive functions like memory; and endorphins mainly modulate pain and pleasure. These distinctions clarify why dopamine is the correct answer to the question about its association with movement, attention, learning, and reward systems.

10. Which brain psychological phenomenon occurs when an individual experiences sensations without an external cause?

A. Hallucinations

B. Hypnagogic sensations

C. Awakening response

D. Charismatic experiences

Hallucinations are experiences in which individuals perceive sensory stimuli without any external source present. This phenomenon can occur in various forms, affecting any of the senses, including sight, sound, taste, touch, and smell. They can arise from a variety of triggers, including mental health disorders, neurological conditions, the effects of certain drugs, or extreme sleep deprivation. Understanding hallucinations is crucial in psychology, as they often indicate underlying psychological conditions such as schizophrenia or can be a result of intense stress or trauma. The experiences of hallucinations can significantly impact individuals' perceptions of reality and their engagements in daily life, making it important to identify and understand their causes and implications. The other options, while they may refer to specific experiences individuals might have, do not accurately define the phenomenon of perceiving sensations without an external cause. Hypnagogic sensations, for instance, relate to experiences that occur during the transition to sleep, often accompanied by visual or auditory phenomena. This differs from hallucinations since hypnagogic sensations are typically not sustained experiences of perceiving reality but rather transient occurrences related to sleep onset.

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!