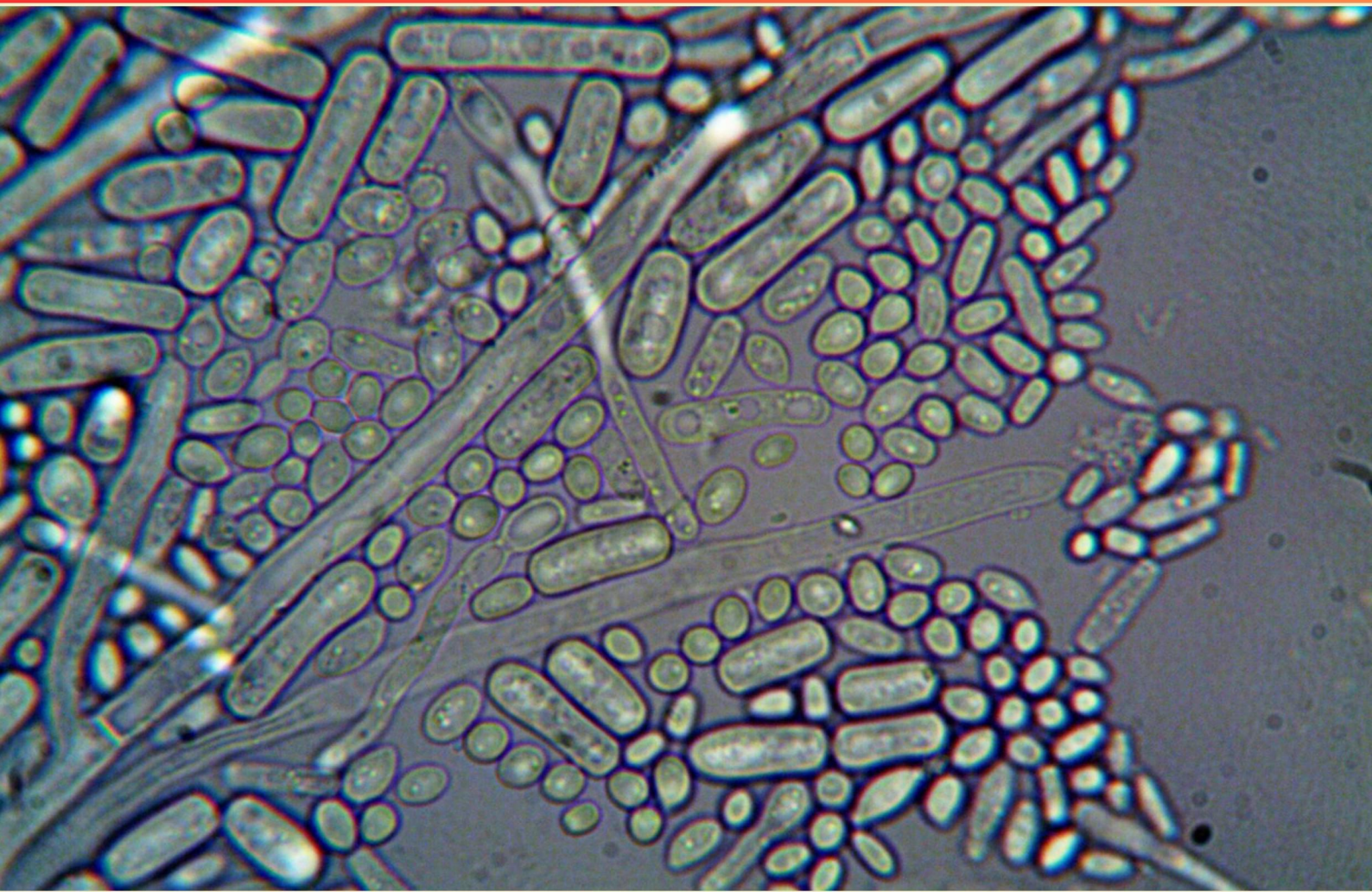


NEW CED – BIOLOGICAL BASIS OF BEHAVIOR PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://newcedbiobasisofbehavior.examzify.com>



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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 consequence of acute stress activation on heart rate?**
 - A. Heart rate decreases
 - B. Heart rate stabilizes
 - C. Heart rate increases
 - D. No effect occurs
- 2. What research method is commonly used to study the influence of genetics on behavior through twins?**
 - A. Experimental study
 - B. Case control study
 - C. Twin study
 - D. Survey research
- 3. What is the primary function of the prefrontal cortex?**
 - A. Emotional regulation
 - B. Memory consolidation
 - C. Complex behaviors such as planning and decision-making
 - D. Motor control
- 4. Which neurotransmitter is known to be the most abundant inhibitory neurotransmitter?**
 - A. Dopamine
 - B. Aserotonin
 - C. GABA
 - D. Norepinephrine
- 5. What is the primary function of the hypothalamus?**
 - A. Regulating emotions
 - B. Controlling voluntary movements
 - C. Directing maintenance activities like eating and drinking
 - D. Processing visual information

- 6. Which psychological perspective emphasizes adaptation to environments and challenges through evolution?**
- A. Behaviorism
 - B. Cognitive psychology
 - C. Humanistic psychology
 - D. Evolutionary psychology
- 7. Which part of the brain is critical for processing fear?**
- A. Cerebellum
 - B. Amygdala
 - C. Frontal lobe
 - D. Medulla
- 8. Which hormone is primarily associated with stress responses and is regulated by the HPA axis?**
- A. Insulin
 - B. Cortisol
 - C. Adrenaline
 - D. Serotonin
- 9. Which term describes the brain's ability to change and reorganize itself, especially during childhood?**
- A. Neurogenesis
 - B. Synaptic pruning
 - C. Plasticity
 - D. Homeostasis
- 10. What is the role of the pineal gland in the endocrine system?**
- A. It produces cortisol for stress regulation
 - B. It regulates metabolic processes
 - C. It produces melatonin, which regulates sleep-wake cycles
 - D. It is responsible for adrenaline production

Answers

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

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Explanations

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1. What is the consequence of acute stress activation on heart rate?

- A. Heart rate decreases
- B. Heart rate stabilizes
- C. Heart rate increases**
- D. No effect occurs

Acute stress activation triggers the body's fight-or-flight response, primarily mediated by the autonomic nervous system. When an individual experiences acute stress, the sympathetic branch of this system is activated. This activation leads to the release of stress hormones such as adrenaline (epinephrine) and norepinephrine. These hormones prepare the body for immediate physical action, resulting in various physiological changes. One of the most significant outcomes is an increase in heart rate. This elevation in heart rate ensures that more oxygen and nutrients are delivered to the muscles and vital organs, thereby enhancing physical performance and increasing alertness in response to perceived threats or stressors. In contrast, the other options do not accurately reflect the physiological response to acute stress. A decrease in heart rate or stabilization would be characteristic of a relaxed or resting state, where the parasympathetic nervous system is in control, while stating there is no effect contradicts the well-established understanding of the body's response to stress. Thus, the increase in heart rate is a direct consequence of acute stress activation.

2. What research method is commonly used to study the influence of genetics on behavior through twins?

- A. Experimental study
- B. Case control study
- C. Twin study**
- D. Survey research

The approach of using twin studies is particularly valuable in exploring the influence of genetics on behavior due to the unique genetic similarities and differences that exist between identical (monozygotic) and fraternal (dizygotic) twins. Identical twins share 100% of their genetic material, while fraternal twins share, on average, 50%. By comparing the behaviors of these two types of twins, researchers can estimate the heritability of specific traits or behaviors. If a behavior is more similar in identical twins than in fraternal twins, this suggests a genetic component to that behavior. This method allows researchers to control for environmental variables to a large extent, as twins often grow up in similar environments, which helps in isolating genetic factors contributing to behavioral differences. This clarity in examining the interplay between genetics and environment is why twin studies are a cornerstone in behavioral genetics research. Other methods listed, such as experimental studies, case control studies, and survey research, may not provide the specific insights into genetic influences on behavior that twin studies can offer.

3. What is the primary function of the prefrontal cortex?

- A. Emotional regulation
- B. Memory consolidation
- C. Complex behaviors such as planning and decision-making**
- D. Motor control

The primary function of the prefrontal cortex is indeed centered around complex behaviors such as planning and decision-making. This area of the brain is critical for higher cognitive processes that involve reasoning, foresight, and the evaluation of consequences, which are essential for making informed decisions. The prefrontal cortex allows individuals to assess different possibilities and outcomes, helping to navigate social interactions and carry out complex tasks. While emotional regulation and memory consolidation are important processes in the brain, they primarily involve other regions, such as the amygdala and hippocampus, respectively. Similarly, motor control is primarily managed by the motor cortex and other associated areas that are more involved in executing movements rather than the cognitive functions of planning and decision-making. Therefore, the prefrontal cortex is best understood as the hub for complex cognitive behaviors that enable individuals to function effectively in a dynamic environment.

4. Which neurotransmitter is known to be the most abundant inhibitory neurotransmitter?

- A. Dopamine
- B. Serotonin
- C. GABA**
- D. Norepinephrine

GABA, or gamma-aminobutyric acid, is recognized as the most abundant inhibitory neurotransmitter in the central nervous system. It plays a crucial role in reducing neuronal excitability throughout the nervous system, which is essential for maintaining the balance between excitation and inhibition in brain activity. By binding to GABA receptors, it leads to the opening of ion channels that allow negatively charged ions to enter the neuron, making it less likely to fire an action potential. This inhibitory function is vital for various processes, including regulating mood, promoting relaxation, and preventing overactivity in neural circuits, which can lead to conditions like anxiety and seizures. The other neurotransmitters listed serve different functions. Dopamine is primarily involved in reward, motivation, and motor control; serotonin contributes to mood regulation and is often associated with feelings of well-being; norepinephrine affects alertness and arousal. However, none of them primarily serve the role of the main inhibitory neurotransmitter as GABA does.

5. What is the primary function of the hypothalamus?

- A. Regulating emotions
- B. Controlling voluntary movements
- C. Directing maintenance activities like eating and drinking**
- D. Processing visual information

The primary function of the hypothalamus is indeed to direct maintenance activities such as eating, drinking, and regulating body temperature, among other essential bodily functions. It plays a crucial role in homeostasis, which is the body's way of maintaining a stable internal environment despite external changes. The hypothalamus is involved in several regulatory processes, including controlling hunger and thirst, and it also influences the autonomic nervous system and the endocrine system, which further impact various bodily functions. Additionally, the hypothalamus regulates the pituitary gland, effectively acting as a bridge between the nervous system and hormonal regulation. This coordination is vital for sustaining energy levels, managing stress responses, and controlling sleep cycles, demonstrating its central role in bodily maintenance. In contrast, other functions mentioned in the other options are not primarily associated with the hypothalamus. For instance, regulating emotions is more closely tied to the limbic system; controlling voluntary movements is mainly managed by motor areas within the cerebral cortex; and processing visual information occurs in the occipital lobe of the brain. Thus, the hypothalamus is best recognized for its critical role in underlying survival-oriented behaviors like eating and drinking, making it the correct answer.

6. Which psychological perspective emphasizes adaptation to environments and challenges through evolution?

- A. Behaviorism
- B. Cognitive psychology
- C. Humanistic psychology
- D. Evolutionary psychology**

The emphasis on adaptation to environments and challenges through evolution aligns closely with the principles of evolutionary psychology. This perspective focuses on how evolutionary processes, such as natural selection, have shaped human thoughts, feelings, and behaviors over time. It posits that many psychological traits and behaviors are adaptive responses that have developed to solve problems related to survival and reproduction in ancestral environments. Evolutionary psychology explores how various aspects of behavior and cognition can be understood as adaptations to environmental demands, thus providing a framework for understanding human psychology from a biological and evolutionary standpoint. This perspective helps explain why certain inherited traits may persist in populations due to their functional benefits in specific contexts, reaffirming the connection between behavior and evolutionary pressures.

7. Which part of the brain is critical for processing fear?

- A. Cerebellum
- B. Amygdala**
- C. Frontal lobe
- D. Medulla

The amygdala is a key structure in the brain involved in the processing of fear and emotional responses. It plays a central role in the detection of threats and the generation of fear responses. When a person perceives a stimulus as threatening, the amygdala becomes activated and triggers a variety of physiological reactions associated with fear, such as increased heart rate, heightened alertness, and the release of stress hormones. This response is part of the body's fight-or-flight mechanism, which prepares an individual to react to danger. In contrast, the other brain areas mentioned have different roles. The cerebellum is primarily involved in motor control and coordination, not in emotional processing. The frontal lobe is associated with higher cognitive functions such as decision-making, planning, and social behavior, rather than the direct processing of fear. The medulla, while crucial for regulating autonomic functions such as breathing and heart rate, does not directly process fear-related information. Therefore, the amygdala stands out as the critical region for processing fear, making it the correct choice in this context.

8. Which hormone is primarily associated with stress responses and is regulated by the HPA axis?

- A. Insulin
- B. Cortisol**
- C. Adrenaline
- D. Serotonin

Cortisol is the hormone primarily associated with stress responses and is regulated by the hypothalamic-pituitary-adrenal (HPA) axis. When an individual perceives a stressor, the HPA axis is activated, leading to the release of corticotropin-releasing hormone (CRH) from the hypothalamus. This hormone stimulates the pituitary gland to release adrenocorticotropic hormone (ACTH), which then prompts the adrenal glands to secrete cortisol into the bloodstream. Cortisol plays a crucial role in the body's response to stress by increasing glucose availability, suppressing non-essential functions, and modulating immune responses. Its effects help the body to manage and cope with stressors effectively, making it a key player in the stress response system. In contrast, insulin is primarily involved in glucose metabolism, adrenaline is involved in the immediate fight-or-flight response rather than long-term stress regulation, and serotonin is more closely linked to mood regulation and well-being, rather than directly tied to the physiological responses associated with stress.

9. Which term describes the brain's ability to change and reorganize itself, especially during childhood?

- A. Neurogenesis
- B. Synaptic pruning
- C. Plasticity**
- D. Homeostasis

The concept that best captures the brain's ability to change and reorganize itself, particularly during childhood, is plasticity. This term refers to the brain's remarkable capacity to adapt its structure and function in response to experience, learning, and environmental changes. During development, especially in early childhood, the brain exhibits a high degree of plasticity, allowing for the formation of new connections and pathways as well as the reorganization of existing ones in response to various stimuli. Plasticity is crucial for learning and memory, enabling individuals to acquire new skills and adapt to new situations. It continues throughout life, although the degree of plasticity tends to decrease with age. Understanding plasticity is fundamental for exploring topics related to brain injury recovery, developmental psychology, and educational strategies, highlighting its importance in both theoretical and practical contexts.

10. What is the role of the pineal gland in the endocrine system?

- A. It produces cortisol for stress regulation
- B. It regulates metabolic processes
- C. It produces melatonin, which regulates sleep-wake cycles**
- D. It is responsible for adrenaline production

The function of the pineal gland is critically tied to its secretion of melatonin, a hormone that plays a significant role in regulating sleep-wake cycles. Melatonin production is influenced by the light-dark cycle, with higher levels produced in response to darkness, signaling to the body that it is time to sleep. This regulation of circadian rhythms is essential for maintaining healthy sleep patterns and overall well-being. The pineal gland's ability to sense light through the retina and its connection to various brain areas allow it to effectively modulate sleep-related hormones. This function highlights the importance of the pineal gland in synchronizing biological processes with the environment, making it a key player in the endocrine system in relation to sleep regulation.

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://newcedbiobasisofbehavior.examzify.com>

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

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