IB Psychology – Biological Approach Practice Test (Sample)

Study Guide

BY EXAMZIFY

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

1. **A reductionist explanation for behaviour suggests there could be many other things affecting behaviour. Which term best captures this critique?**

   A. Reductionism

   B. Determinism

   C. Limitations of neurotransmitters

   D. Simplification

2. **Which study showed posterior hippocampus enlargement in London taxi drivers?**

   A. O'Keefe and Nadel

   B. Squire

   C. Maguire et al. (2000)

   D. Rosenzweig and Bennet

3. **Current evidence regarding pheromones in humans is:**

   A. Non-existent

   B. Inconclusive

   C. Definitive

   D. Well-established

4. **Which hormone has been linked to aggression and status-seeking behavior in rats?**

   A. Testosterone

   B. Estrogen

   C. Cortisol

   D. Adrenaline

5. **What are chemical messengers produced by endocrine glands that travel through the bloodstream to affect other tissues?**

   A. Endocrine glands

   B. Hormones

   C. Pheromones

   D. Neurotransmitters

6. Which compound found in sweat has been proposed to signal sexual attractiveness?

A. Testosterone

B. Oxytocin

C. Androstadienone

D. Adrenaline

7. Which researchers proposed that androstadienone found in sweat may signal sexual attractiveness?

A. Keller and Johansson (2005)

B. Lundstrom and Olsson (2005)

C. Smith and Jones (2005)

D. O'Neil and Patel (2005)

8. What is the process by which the part of one neuron establishes a connection with other neurons?

A. Localization

B. Cortical remapping

C. Dendritic branching

D. Neural network

9. What term describes the observable characteristics of an organism resulting from the interaction between its genotype and the environment?

A. Phenotype

B. Genotype

C. Chromosome

D. Epigenetics

10. Which structure is the emotional center of the brain and triggers fear?

A. Localization

B. Prefrontal Cortex

C. Broca's Area

D. Amygdala

Answers

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

Explanations

1. A reductionist explanation for behaviour suggests there could be many other things affecting behaviour. Which term best captures this critique?

A. Reductionism

B. Determinism

C. Limitations of neurotransmitters

D. Simplification

Reductionist explanations explain behavior by reducing it to basic biological components, like neurotransmitters, but this approach is often limited because it overlooks many other influences on behavior. The best term here is the idea that there are limitations to neurotransmitters as an explanatory focus. Neurotransmitters can play a role, but behavior arises from a complex mix of biology, cognition, environment, learning, and social factors. Acknowledging the limitations of explaining behavior solely through neurotransmitters captures the critique that reductionism may miss important contributing factors. The other terms don't pinpoint this specific critique as clearly: determinism speaks to inevitability, simplification is too general, and reductionism refers to the approach itself rather than its acknowledged limits.

2. Which study showed posterior hippocampus enlargement in London taxi drivers?

A. O'Keefe and Nadel

B. Squire

C. Maguire et al. (2000)

D. Rosenzweig and Bennet

Neuroplasticity in the hippocampus driven by real-world navigation experience. London taxi drivers rely intensely on spatial memory to navigate and memorize routes, so researchers scanned their brains and compared them with non-t taxi drivers. The findings showed a larger posterior hippocampus in the drivers, and importantly, the size there correlated with how many years someone had spent driving taxis. This region is linked to spatial processing and memory, so the enlargement reflects structural changes associated with the demanding navigational tasks these drivers perform. The study provided direct evidence that adult brain structure can adapt to experiential demands, illustrating hippocampal plasticity. Other figures in the field contributed foundational ideas—one proposed the hippocampus as a cognitive map, another mapped memory systems, and another demonstrated effects of enriched environments in animals—but Maguire and colleagues are the ones who demonstrated posterior hippocampal enlargement in human navigators.

3. Current evidence regarding pheromones in humans is:

A. Non-existent

B. Inconclusive

C. Definitive

D. Well-established

In humans, the idea of pheromones shaping behavior is not settled. Unlike many animals where chemical signals produce clear, automatic responses, human findings are mixed and hard to replicate. Researchers have investigated candidate chemosignals such as certain steroids that might influence mood, arousal, or perception, but results are inconsistent and often small in effect. Methodological challenges—varying odor delivery, detection thresholds, individual differences in olfactory sensitivity, and cultural or expectancy effects—make it hard to draw a clear, universal conclusion. Because there isn't a robust, consistently replicated demonstration that a human pheromone reliably triggers a specific behavior or response across studies, the current evidence is best described as inconclusive.

4. Which hormone has been linked to aggression and status-seeking behavior in rats?

A. Testosterone

B. Estrogen

C. Cortisol

D. Adrenaline

Hormones influence aggression and dominance in animals, with testosterone playing a central role in rats. In male rats, higher testosterone is tied to more frequent aggressive encounters and displays of dominance during territory defense or mate competition. Castration reduces aggression and status-seeking behaviors, while testosterone replacement restores them, showing a causal link between this hormone and those social behaviors. Brain regions such as the amygdala and hypothalamus respond to testosterone, helping translate hormonal signals into aggressive or dominant actions within a social context. Other hormones like estrogen, cortisol, and adrenaline can affect behavior, but testosterone is the most directly linked to aggression and status-seeking in rats.

5. What are chemical messengers produced by endocrine glands that travel through the bloodstream to affect other tissues?

A. Endocrine glands

B. Hormones

C. Pheromones

D. Neurotransmitters

Endocrine signaling uses chemical messengers that travel through the bloodstream to reach distant tissues. These messengers are hormones produced by endocrine glands such as the pituitary, thyroid, adrenal glands, and pancreas. Once in the blood, hormones bind to receptors on target cells to regulate processes like metabolism, growth, and reproduction. This system differs from neurotransmitters, which are released at synapses to produce rapid, local effects on nearby neurons or muscles, and from pheromones, which are chemicals released into the environment to influence other individuals rather than the body's own tissues. Because hormones travel via the bloodstream, their effects are typically slower to start but longer-lasting.

6. Which compound found in sweat has been proposed to signal sexual attractiveness?

A. Testosterone

B. Oxytocin

C. Androstadienone

D. Adrenaline

Humans can use chemical signals from sweat to influence social and sexual behavior. Androstadienone is a steroid found in male sweat that has been proposed to function as a pheromone signaling sexual attractiveness. Research has suggested that exposure to this compound can affect how women perceive potential partners—sometimes influencing ratings of attractiveness and even triggering brain activity in areas linked to mating and social processing. The idea is not that it guarantees attraction, but that it can modulate responses in a way that supports mate signaling. The other substances don't fit as this specific signal: testosterone is a hormone circulating in the body rather than a sweat-based cue tied to attractiveness; oxytocin is a neuropeptide linked to bonding and social trust, not a pheromonal signal in sweat; adrenaline is a stress-related hormone not proposed as a cue for sexual attractiveness in sweat.

7. Which researchers proposed that androstadienone found in sweat may signal sexual attractiveness?

A. Keller and Johansson (2005)

B. Lundstrom and Olsson (2005)

C. Smith and Jones (2005)

D. O'Neil and Patel (2005)

The main idea here is that chemical signals in sweat can influence social and sexual perception, functioning like a pheromone in humans. Androstadienone, a steroid found in male sweat, was proposed by Lundström and Olsson as a signal that can convey sexual attractiveness. In their work, they showed that when women were exposed to androstadienone, their judgments of male faces and their mood could be altered compared with a neutral control odor. This pattern supports the view that AND might act as a chemical cue signaling sexual relevance, influencing attraction in a non-conscious way. That specific proposal and evidence are attributed to Lundström and Olsson (2005), which is why this option is the best fit.

8. What is the process by which the part of one neuron establishes a connection with other neurons?

A. Localization

B. Cortical remapping

C. Dendritic branching

D. Neural network

Dendritic branching reflects how a neuron grows its input surface to form connections with many other neurons. As dendrites extend and branch, they create more potential sites for synapses, allowing a single neuron to connect with multiple partners and integrate diverse signals, which is the foundation of neural circuits. The other terms describe broader brain functions or systems rather than the per-neuron process of establishing connections: localization is about mapping functions to brain regions, cortical remapping is reorganization after change or injury, and a neural network refers to the whole system of interconnected neurons rather than how one neuron forms contacts.

9. What term describes the observable characteristics of an organism resulting from the interaction between its genotype and the environment?

A. Phenotype

B. Genotype

C. Chromosome

D. Epigenetics

Phenotype describes the observable characteristics of an organism that result from the interaction between its genetic makeup and the environment. The genotype provides the genetic blueprint, while environmental factors—such as nutrition, temperature, or experiences—shape how that blueprint is expressed in physical traits, physiology, and behavior. Epigenetics is about how environmental factors can influence gene expression without altering the DNA sequence, which can affect phenotype, but the term for the traits you can observe is phenotype. The genotype is the underlying genetic code, and chromosomes are the structures that organize DNA; neither is the set of observable traits.

10. Which structure is the emotional center of the brain and triggers fear?

A. Localization

B. Prefrontal Cortex

C. Broca's Area

D. Amygdala

The amygdala is the brain's emotional center for fear, quickly assessing potential threats and kicking off the fear response. It can detect danger even before we're consciously aware of it, sending signals that raise heart rate, release stress hormones, and prepare the body to fight or flee. It also helps form emotional memories of fearful events, so similar situations later trigger a quick, learned reaction. This rapid, automatic processing is what makes the amygdala central to fear. The other structures aren't acting as the emotional trigger for fear. The prefrontal cortex is more about planning, judgment, and regulating emotions after a threat is detected. Broca's area is involved in language production, not emotion. The idea of localization is a general principle about where functions occur in the brain, not a specific structure responsible for fear.

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://ibpsychbiologicalapproach.examzify.com

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