CIEMT MEDICAL AND PHYSIOLOGY PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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.

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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!

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Questions

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1. Which term describes substances that depress the central nervous system?

A. Sedative-Hypnotic
B. Hallucinogen
C. Metabolism
D. Basal Metabolic Rate

2. What term is the sensory warning before a seizure?

A. Aura
B. Intracranial Pressure
C. Epidural Hematoma
D. Cushing Triad

3. Bath Salts are best described as which class of drugs?

A. Opioids
B. Cannabinoids
C. Synthetic cathinones
D. Hallucinogens

4. A severe allergic reaction affecting multiple organ systems?

A. Diabetes Mellitus
B. Anaphylaxis
C. Insulin
D. Glucagon

5. Pulseless ventricular tachycardia is best described as?

A. Chaotic rhythm with a pulse
B. Fast rhythm with a pulse, non-shockable
C. Regular rhythm with no pulse, shockable
D. Fast rhythm without pulse, shockable

6. What is the primary function of the AV node in the heart?

A. Initiates ventricular contraction
B. Delays impulse before ventricles contract
C. Sends impulses to the brain
D. Pumps blood to the lungs

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7. Antigen is which of the following?

A. Receptor on B cell

B. Substance causing allergic reaction

C. Protein produced by T cells

D. Substance triggering immune response

8. Distributive shock is characterized by which mechanism?

A. Hypovolemic Shock

B. Obstructive Shock

C. Distributive Shock

D. Neurogenic Shock

9. Neurogenic shock is caused by spinal injury leading to which physiological change?

A. Anaphylactic Shock

B. Neurogenic Shock

C. Septic Shock

D. Hypovolemic Shock

10. A Glasgow Coma Scale score of 8 or less indicates what level of brain injury?

A. Mild impairment

B. Normal

C. Severe brain injury

D. Coma

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Answers

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

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Explanations

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1. Which term describes substances that depress the central nervous system?

A. Sedative-Hypnotic

B. Hallucinogen

C. Metabolism

D. Basal Metabolic Rate

This question tests understanding of substances that depress brain activity. Substances that depress the central nervous system slow down neural activity, leading to calming effects or sleep. The category that specifically describes drugs with these effects is sedative-hypnotic, which covers agents that produce sedation (calmness) and hypnosis (sleep). Hallucinogens, on the other hand, primarily alter perception and cognition rather than dampening CNS activity. Metabolism refers to the chemical processes in the body, not a drug category, and basal metabolic rate is the rate of energy use at rest, also not related to CNS depressant effects. So sedative-hypnotic is the best fit.

2. What term is the sensory warning before a seizure?

A. Aura

B. Intracranial Pressure

C. Epidural Hematoma

D. Cushing Triad

Aura is the sensory warning before a seizure. It's a subjective event that signals the onset of a focal seizure and can take many forms, such as unusual smells or tastes, flashes of light, tingling, dizziness, déjà vu, or fear. Because an aura reflects activity in a specific brain region, it can help indicate where the seizure starts. In some people with generalized seizures, there may be no aura at all. The other options describe brain problems not related to a pre-seizure warning: intracranial pressure refers to elevated pressure inside the skull, epidural hematoma is a traumatic bleed between the skull and dura, and Cushing triad is a set of signs (high blood pressure, slow heart rate, irregular respirations) indicating dangerous intracranial hypertension.

3. Bath Salts are best described as which class of drugs?

A. Opioids

B. Cannabinoids

C. Synthetic cathinones

D. Hallucinogens

Bath salts describe a group of synthetic cathinones, a class of stimulant drugs chemically related to cathinone found in the khat plant. They are designed to mimic stimulant effects and often act by blocking reuptake and promoting release of dopamine, norepinephrine, and serotonin in the brain, producing increased energy, alertness, and altered mood. This pharmacology fits best with synthetic cathinones, distinguishing them from opioids (which act on mu receptors to produce analgesia and sedation), cannabinoids (which act on cannabinoid receptors) and classic hallucinogens (which mainly produce perceptual changes through serotonergic systems like 5-HT2A receptors). Bath salts can cause dangerous cardiovascular and CNS effects such as tachycardia, hypertension, hyperthermia, agitation, paranoia, and seizures, so management focuses on calming the patient with supportive care and benzodiazepines, along with monitoring and treating any complications.

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4. A severe allergic reaction affecting multiple organ systems?

A. Diabetes Mellitus

B. Anaphylaxis

C. Insulin

D. Glucagon

Anaphylaxis is a severe allergic reaction that involves multiple organ systems. It happens when an allergen triggers IgE-mediated activation of mast cells and basophils, releasing mediators like histamine that cause widespread effects: skin manifestations such as flushing or hives, airway swelling and bronchoconstriction leading to breathing difficulties, sudden dilation and increased permeability of blood vessels causing a drop in blood pressure, and gastrointestinal symptoms. Because it can rapidly progress to airway obstruction and shock, urgent treatment with epinephrine and supportive care is essential. The other terms are not this condition: diabetes mellitus is a chronic metabolic disorder, while insulin and glucagon are hormones used to regulate blood glucose, not a systemic allergic reaction.

5. Pulseless ventricular tachycardia is best described as?

A. Chaotic rhythm with a pulse

B. Fast rhythm with a pulse, non-shockable

C. Regular rhythm with no pulse, shockable

D. Fast rhythm without pulse, shockable

Pulseless ventricular tachycardia is best described as a fast rhythm without a pulse that is shockable. In VT, the ventricles beat rapidly, which reduces effective blood flow, and if there is no detectable pulse, circulation is essentially absent, placing the patient in cardiac arrest. Because this scenario is unstable and the heart rhythm is one that can be reset with defibrillation, it is treated as a shockable arrest rhythm with immediate unsynchronized defibrillation. If a pulse were present, the approach would shift to synchronized cardioversion rather than defibrillation.

6. What is the primary function of the AV node in the heart?

A. Initiates ventricular contraction

B. Delays impulse before ventricles contract

C. Sends impulses to the brain

D. Pumps blood to the lungs

The main idea is that the AV node slows the electrical signal as it passes from the atria to the ventricles. This deliberate delay gives the atria time to contract and push blood into the ventricles before the ventricles are activated to contract, ensuring optimal ventricular filling and coordinated timing in the heartbeat. The signal then moves on to the His-Purkinje system to trigger ventricular contraction. That's why delaying the impulse before ventricular contraction is the best description of the AV node's primary function. The other options relate to other parts of the heart: ventricular contraction is driven by the ventricles after the AV delay, impulses reaching the brain isn't a function of the AV node, and pumping blood to the lungs is the job of the right ventricle.

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7. Antigen is which of the following?

A. Receptor on B cell

B. Substance causing allergic reaction

C. Protein produced by T cells

D. Substance triggering immune response

An antigen is any molecule or part of a molecule that the immune system can recognize and bind to with antibodies or T cell receptors, triggering an adaptive immune response. Recognition is highly specific, so antibodies and T cells respond to particular structures on the antigen. Pathogen components like proteins or polysaccharides are common antigens, but antigens can also be other molecules; small molecules (haptens) become immunogenic when attached to a carrier. Allergens are special kinds of antigens that provoke allergic reactions, but not all antigens cause allergy. The key idea is that the substance activates the immune response.

8. Distributive shock is characterized by which mechanism?

A. Hypovolemic Shock

B. Obstructive Shock

C. Distributive Shock

D. Neurogenic Shock

Distributive shock is driven by widespread vasodilation with maldistribution of blood flow. When the vessels dilate broadly, systemic vascular resistance falls and blood pools in the venous system, so venous return to the heart drops and tissue perfusion suffers despite the total blood volume being normal or even high. This mechanism explains why perfusion is impaired even though the overall blood volume may not be reduced. Causes include sepsis, anaphylaxis, and neurogenic injury, which all promote excessive vasodilation. In contrast, hypovolemic shock comes from actual loss of circulating blood volume, and obstructive shock from a physical blockage to cardiac filling or outflow. Neurogenic shock is a form of distributive shock caused by loss of sympathetic tone, leading to vasodilation.

9. Neurogenic shock is caused by spinal injury leading to which physiological change?

A. Anaphylactic Shock

B. Neurogenic Shock

C. Septic Shock

D. Hypovolemic Shock

Neurogenic shock occurs when spinal injury disrupts the sympathetic outflow that normally maintains vascular tone. Without that sympathetic input, blood vessels dilate (loss of vasoconstrictor tone), causing pooling of blood in the peripheral circulation, reduced venous return to the heart, and often lower cardiac output. The result is low blood pressure, and heart rate can be slowed due to unopposed parasympathetic activity. This differs from other shock types because the total blood volume is typically not reduced, but the distribution of blood is abnormal due to loss of vascular tone.

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10. A Glasgow Coma Scale score of 8 or less indicates what level of brain injury?

A. Mild impairment

B. Normal

C. Severe brain injury

D. Coma

The Glasgow Coma Scale measures consciousness by three domains—eye opening, verbal response, and motor response—yielding a total from 3 to 15, with lower scores showing deeper impairment. Scores from 3 to 8 are categorized as severe brain injury, reflecting major loss of arousal and responsiveness and typically associated with a coma state. So a score of 8 or less points to severe brain injury rather than mild impairment or normal function. (Note: coma often accompanies this level, but the standard label is severe brain injury.)

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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://ciemtmedicalphysiology.examzify.com

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

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