

CERTIFIED REGISTERED NURSE ANESTHETIST (CRNA) PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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 function of the catheter used to measure wedge pressure?**
 - A. To deliver medication to the pulmonary arteries
 - B. To measure oxygen saturation in the blood
 - C. To permit indirect measurement of mean left atrial pressure
 - D. To assess right ventricle function directly

- 2. What is the normal cerebral perfusion pressure (CPP) range?**
 - A. 50-70 mmHg
 - B. 60-100 mmHg
 - C. 80-120 mmHg
 - D. 70-90 mmHg

- 3. Which sign is associated with a basilar skull fracture?**
 - A. Battle sign
 - B. Bradycardia
 - C. Hypertension
 - D. Hepatomegaly

- 4. How can blood pressure altering medications influence anesthesia management?**
 - A. They can cause bradycardia during the procedure
 - B. They can lead to hypotension or hypertension during the procedure requiring careful monitoring
 - C. They provide a more stable hemodynamic baseline
 - D. They are not relevant to anesthesia practice

- 5. What defines a full stomach in the context of tracheal intubation?**
 - A. Presence of gastric contents or recent food intake
 - B. Increased esophageal pressure
 - C. Decreased lower esophageal pressure
 - D. Absence of gastrointestinal motility

- 6. Why does a newborn with bilateral choanal atresia present with severe respiratory distress?**
- A. The newborn is a mouth breather
 - B. Obligatory nose breathing
 - C. Inability to cry effectively
 - D. Infection in the nasal passages
- 7. Why is it crucial for CRNAs to understand the effects of blood pressure medications on anesthesia?**
- A. To evaluate patient history for allergies
 - B. To manage potential hemodynamic instability during the procedure
 - C. To determine the best anesthetic agents
 - D. To plan for post-operative care only
- 8. What is the mechanism of action for epinephrine?**
- A. Inhibits phosphodiesterase
 - B. Inhibits calcium reuptake
 - C. Direct-acting alpha and beta agonist
 - D. Serves as a competitive antagonist
- 9. Which of the following is a potential complication of general anesthesia?**
- A. Increased alertness post-surgery
 - B. Nausea and vomiting
 - C. Prolonged local anesthesia
 - D. Improved pain management
- 10. What condition is indicated by a rapid rise in body temperature following anesthesia administration?**
- A. Heat stroke
 - B. Malignant hyperthermia
 - C. Infection
 - D. Malignant hypothermia

Answers

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

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Explanations

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1. What is the function of the catheter used to measure wedge pressure?

- A. To deliver medication to the pulmonary arteries
- B. To measure oxygen saturation in the blood
- C. To permit indirect measurement of mean left atrial pressure**
- D. To assess right ventricle function directly

The function of the catheter used to measure wedge pressure is to permit an indirect measurement of mean left atrial pressure. When the catheter, typically a pulmonary artery catheter, is inserted into the pulmonary artery, it can be "wedged" into a smaller branch of the artery. This wedging occludes the artery and allows for the measurement of pressure that reflects the pressure in the left atrium. This measurement is crucial in assessing cardiac function and the hemodynamic status of a patient. The left atrial pressure gives insights into the left heart's ability to receive blood from the lungs and can indicate conditions such as heart failure or fluid overload. By measuring this pressure, clinicians can make informed decisions about treatment and management strategies. Understanding this function also helps clarify why the other options do not fit. Delivering medication to the pulmonary arteries pertains to a different function of catheters, primarily used for therapeutic purposes. Measuring oxygen saturation involves different types of sensors and techniques and does not directly relate to wedge pressure. Lastly, while assessing right ventricle function is important in cardiology, it involves different assessments rather than the indirect measurement that wedge pressure provides for the left atrium.

2. What is the normal cerebral perfusion pressure (CPP) range?

- A. 50-70 mmHg
- B. 60-100 mmHg**
- C. 80-120 mmHg
- D. 70-90 mmHg

The normal cerebral perfusion pressure (CPP) range is considered to be between 60-100 mmHg. This range is crucial for maintaining adequate blood flow to the brain, which is essential for normal neurological function. CPP is calculated using the formula: $CPP = \text{Mean Arterial Pressure (MAP)} - \text{Intracranial Pressure (ICP)}$. A CPP value within this range ensures that the brain receives sufficient oxygen and nutrients while removing metabolic wastes. If the CPP falls below 60 mmHg, it may indicate inadequate perfusion, leading to potential ischemia and damage to brain tissue. Conversely, values significantly above 100 mmHg can indicate hyperperfusion, which may also have detrimental effects. The range 60-100 mmHg is considered optimal for preventing both ischemic and hyperperfusion injuries, supporting optimal cerebral metabolism and function. Understanding this range is fundamental for healthcare professionals, especially those working in critical care and anesthesia, as they must assess and manage the perfusion needs of their patients effectively.

3. Which sign is associated with a basilar skull fracture?

- A. Battle sign
- B. Bradycardia
- C. Hypertension
- D. Hepatomegaly

A basilar skull fracture is a type of skull fracture that occurs at the base of the skull and can present with specific clinical signs due to the involvement of certain cranial structures. Among the signs associated with this type of fracture, Battle sign is particularly significant. This sign manifests as bruising behind the ear, often referred to as "mastoid ecchymosis," and occurs due to blood leaking from the skull to the soft tissues in that area. This bruising is a result of the fracture's proximity to vascular structures and the potential tearing of blood vessels. In contrast, the other signs listed do not specifically correlate with basilar skull fractures. Bradycardia (a slow heart rate) can occur in various medical conditions, especially those affecting the central nervous system or due to medications, but it is not a hallmark of a skull fracture. Hypertension (elevated blood pressure) is not directly related to fractures but can be seen in different clinical scenarios, and hepatomegaly (enlargement of the liver) is unrelated to head injuries and suggests liver pathology instead. Thus, Battle sign serves as a key indicator of a basilar skull fracture and highlights the importance of recognizing specific trauma-related signs in clinical practice.

4. How can blood pressure altering medications influence anesthesia management?

- A. They can cause bradycardia during the procedure
- B. They can lead to hypotension or hypertension during the procedure requiring careful monitoring
- C. They provide a more stable hemodynamic baseline
- D. They are not relevant to anesthesia practice

Blood pressure altering medications can significantly impact anesthesia management due to their potential effects on cardiovascular stability during surgical procedures. These medications may cause fluctuations in blood pressure, such as hypotension or hypertension, which necessitate careful monitoring and management by the anesthesia provider. During anesthesia, maintaining hemodynamic stability is crucial, and the administration of these medications can lead to unexpected changes in blood pressure. For instance, a patient on antihypertensive medication might experience hypotension when they undergo anesthesia, particularly with the use of certain anesthetic agents that can further depress blood pressure. Conversely, patients with previously uncontrolled hypertension might experience episodes of elevated blood pressure during surgery, potentially complicating the anesthetic plan. Consequently, understanding the pharmacodynamics of these medications and their potential side effects allows the anesthesia provider to anticipate changes, adjust medications accordingly, and implement interventions to maintain optimal hemodynamic parameters throughout the procedure. Monitoring blood pressure closely ensures that any changes can be addressed promptly, preventing adverse outcomes during anesthesia.

5. What defines a full stomach in the context of tracheal intubation?

A. Presence of gastric contents or recent food intake

B. Increased esophageal pressure

C. Decreased lower esophageal pressure

D. Absence of gastrointestinal motility

A full stomach in the context of tracheal intubation refers to the presence of gastric contents or recent food intake. This is an important consideration in anesthesia practice because a full stomach increases the risk of aspiration during intubation. When a patient has not adequately fasted before undergoing anesthesia, there is a potential for stomach contents to regurgitate and enter the airway, leading to serious complications. Understanding the implications of a full stomach is critical for CRNAs, as it affects the management of airway and anesthetic techniques. Protocols may include preoperative fasting guidelines to mitigate this risk, highlighting the necessity for all healthcare providers involved in the perioperative care of patients to recognize signs of a full stomach. The other options may be relevant in other contexts related to gastrointestinal physiology or different aspects of patient health but do not define what constitutes a full stomach in the context of anesthesia and tracheal intubation. For instance, increases or decreases in esophageal pressure relate more to the function of the esophagus rather than the status of gastric contents. Similarly, the absence of gastrointestinal motility pertains to gut function but does not directly indicate fullness of the stomach.

6. Why does a newborn with bilateral choanal atresia present with severe respiratory distress?

A. The newborn is a mouth breather

B. Obligatory nose breathing

C. Inability to cry effectively

D. Infection in the nasal passages

A newborn with bilateral choanal atresia presents with severe respiratory distress primarily due to the condition's impact on breathing patterns. In infants, normal respiration is predominantly nasal, as they are obligate nasal breathers. When choanal atresia occurs, this anatomical obstruction prevents air from flowing through the nasal passages to the lungs during inhalation. As a result, the newborn cannot get adequate oxygen through the nasal route, leading to significant respiratory distress. The fact that newborns are obligate nasal breathers means that, unlike older children and adults who can compensate for nasal obstruction by breathing through their mouths, these infants cannot effectively do so. They rely entirely on the patency of their nasal passages to breathe. When both passages are obstructed, as in bilateral choanal atresia, the lack of airflow can quickly lead to life-threatening hypoxia and respiratory distress. In this scenario, while mouth breathing may seem like a possible adaptation, it is not an option for newborns until they learn and develop the ability to breathe through the mouth effectively. Additionally, characteristics such as ineffective crying or infection in the nasal passages do not directly contribute to the primary issue at hand, which is the inability to ventilate adequately due to the obstruction. Therefore, the

7. Why is it crucial for CRNAs to understand the effects of blood pressure medications on anesthesia?

- A. To evaluate patient history for allergies
- B. To manage potential hemodynamic instability during the procedure**
- C. To determine the best anesthetic agents
- D. To plan for post-operative care only

Understanding the effects of blood pressure medications on anesthesia is vital for CRNAs primarily because these medications can significantly impact a patient's hemodynamic status during surgery. Blood pressure medications can alter vascular tone, cardiac output, and overall blood pressure control, which are critical factors in the anesthetic management of a patient. If a CRNA is aware of how these medications interact with anesthetic agents, they can anticipate and manage potential hemodynamic instability, such as hypotension or hypertension, that may occur during the procedure. This knowledge enables the CRNA to adjust anesthetic dosages, apply appropriate fluid management strategies, and utilize medications to stabilize blood pressure as needed. In summary, a thorough understanding of the effects of blood pressure medications ensures that the CRNA is prepared to maintain hemodynamic stability throughout the surgical process, minimizing the risk of complications and contributing to better patient outcomes.

8. What is the mechanism of action for epinephrine?

- A. Inhibits phosphodiesterase
- B. Inhibits calcium reuptake
- C. Direct-acting alpha and beta agonist**
- D. Serves as a competitive antagonist

Epinephrine's mechanism of action as a direct-acting alpha and beta agonist is crucial for its role in the body. As both an alpha and beta receptor agonist, epinephrine stimulates alpha-1 adrenergic receptors, leading to vasoconstriction, which increases systemic vascular resistance and blood pressure. Simultaneously, it interacts with beta-1 adrenergic receptors in the heart, enhancing heart rate and contractility, which boosts cardiac output. Furthermore, its action on beta-2 adrenergic receptors results in bronchodilation and relaxation of smooth muscles, particularly in the airways, making it an essential medication for conditions such as asthma and anaphylaxis. This dual action of stimulating both types of adrenergic receptors allows epinephrine to be effective in a variety of clinical scenarios, especially in emergency situations where rapid cardiovascular support and bronchodilation are needed. The understanding of its mechanism is fundamental for CRNA professionals, as it underlines why epinephrine is often a first-line treatment in acute allergic reactions and cardiac arrest situations.

9. Which of the following is a potential complication of general anesthesia?

- A. Increased alertness post-surgery
- B. Nausea and vomiting**
- C. Prolonged local anesthesia
- D. Improved pain management

Nausea and vomiting are recognized as common complications associated with general anesthesia due to a variety of factors, including the type of anesthetic agents used, the patient's individual response, and the duration of the surgery. These effects can be attributed to the impact of anesthesia on the central nervous system and gastrointestinal tract. During general anesthesia, certain drugs can stimulate the chemoreceptor trigger zone in the brain, leading to postoperative nausea and vomiting. This is particularly prevalent in certain populations, such as patients undergoing procedures involving the abdomen or in those who have a history of motion sickness or previous nausea after anesthesia. Management strategies often involve administering antiemetic medications either during or after the procedure to mitigate these effects. Understanding this complication is crucial for anesthesia providers to prepare for and manage postoperative recovery effectively. The other options, such as increased alertness post-surgery, prolonged local anesthesia, and improved pain management, do not align with typical complications from general anesthesia and may imply positive outcomes or distinct experiences rather than complications.

10. What condition is indicated by a rapid rise in body temperature following anesthesia administration?

- A. Heat stroke
- B. Malignant hyperthermia**
- C. Infection
- D. Malignant hypothermia

Malignant hyperthermia is a critical condition that can occur in response to certain anesthetic agents, particularly volatile anesthetics and succinylcholine. It is characterized by a rapid and extreme increase in body temperature, often exceeding 104°F (40°C), as well as a hypermetabolic state leading to muscle rigidity, tachycardia, and potentially severe metabolic acidosis. The pathophysiology involves an abnormal release of calcium from the sarcoplasmic reticulum of skeletal muscle, which increases metabolic activity and leads to an overwhelming demand for ATP, resulting in heat production and muscle damage. Immediate recognition and intervention are crucial; the primary treatment is the administration of dantrolene, which acts to reduce calcium release from the sarcoplasmic reticulum. While conditions such as heat stroke and infections can also lead to elevated body temperatures, they typically have different triggers and physiological mechanisms distinct from the rapid onset associated with malignant hyperthermia in the perioperative setting. Heat stroke is usually related to environmental factors or exertion, and infections involve an immune response rather than direct pharmacological interactions seen in malignant hyperthermia. Malignant hypothermia, on the other hand, is not a recognized term in medical literature, as hyp

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://crna.examzify.com>

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

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