

Certified Registered Nurse Anesthetist (CRNA) Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

This is a sample study guide. To access the full version with hundreds of questions,

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	6
Answers	9
Explanations	11
Next Steps	17

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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!

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Questions

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1. What should be the immediate action if a patient exhibits signs of anaphylaxis during anesthesia?

- A. Start CPR**
- B. Administer antihistamines**
- C. Delay intervention to assess the situation**
- D. Administer epinephrine**

2. 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**

3. What is the recommended dose range for Etomidate when used for intubation?

- A. 0.1-0.2 mg/kg**
- B. 0.2-0.3 mg/kg**
- C. 0.3-0.4 mg/kg**
- D. 0.5-0.6 mg/kg**

4. In diastolic heart failure, what is typically observed?

- A. Increased stroke volume**
- B. Decreased ejection fraction**
- C. Normal ejection fraction**
- D. Enlarged heart**

5. Which receptor is specifically stimulated by phenylephrine?

- A. Beta 1**
- B. Beta 2**
- C. Alpha 1**
- D. Alpha 2**

6. Which symptom is associated with systolic heart failure?

- A. Normal ejection fraction**
- B. Enlarged heart**
- C. Normal heart size**
- D. Normal stroke volume**

7. A neonate has Apgar scores of 8 and 8. He is pink when actively crying, but cyanosis and retractions appear when he is quiet. What is the most likely diagnosis?

- A. Choanal atresia**
- B. Tracheoesophageal fistula**
- C. Pneumothorax**
- D. Congenital diaphragmatic hernia**

8. What is the main action of the drug milrinone in the context of heart failure treatment?

- A. Increases preload**
- B. Reduces heart rate**
- C. Improves cardiac contractility**
- D. Increases systemic vascular resistance**

9. What is the goal of the ACC/AHA preoperative cardiac assessment?

- A. To optimize nutritional status**
- B. To identify patients at risk for cardiac complications during surgery**
- C. To assess patient psychological readiness**
- D. To ensure adequate anesthesia depth**

10. What should be done immediately after a failed intubation and inadequate two-handed mask ventilation?

- A. Call for help**
- B. Insert an LMA**
- C. Attempt intubation again**
- D. Begin bag-mask ventilation**

Answers

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

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Explanations

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1. What should be the immediate action if a patient exhibits signs of anaphylaxis during anesthesia?

- A. Start CPR**
- B. Administer antihistamines**
- C. Delay intervention to assess the situation**
- D. Administer epinephrine**

In the event that a patient shows signs of anaphylaxis during anesthesia, the immediate and critical action is to administer epinephrine. Anaphylaxis is a severe, life-threatening allergic reaction that can occur quickly and requires rapid intervention to prevent further deterioration of the patient's condition. Epinephrine acts as a bronchodilator and vasopressor, helping to open the airways and restore normal blood circulation, which is crucial during an allergic response. This prompt administration of epinephrine can significantly improve the patient's chances of recovery and counteract the potentially fatal effects of anaphylaxis. It is typically given intramuscularly and may need to be repeated based on the patient's response. Timeliness is essential in these situations, as delays can lead to increased morbidity or mortality. Other treatment options such as antihistamines and CPR are relevant in the broader context of allergic reactions or cardiac issues, but they do not address the immediate severity of anaphylaxis as effectively as epinephrine. Delaying intervention to assess the situation is also not advised since anaphylaxis can progress rapidly, and prompt action is essential to ensure the patient's safety.

2. 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.

3. What is the recommended dose range for Etomidate when used for intubation?

- A. 0.1-0.2 mg/kg
- B. 0.2-0.3 mg/kg**
- C. 0.3-0.4 mg/kg
- D. 0.5-0.6 mg/kg

The recommended dose range for Etomidate when used for intubation is indeed between 0.2 and 0.3 mg/kg. This dosage provides an effective balance of rapid induction and hemodynamic stability, which is crucial for patients who may be compromised or have variable cardiovascular responses. Etomidate is a short-acting anesthetic agent noted for its minimal cardiovascular and respiratory effects, making it particularly useful in emergency intubation scenarios or in patients with unstable hemodynamics. The dosing range of 0.2 to 0.3 mg/kg ensures sufficient sedation and facilitates successful intubation while reducing the risk of adverse effects. Doses outside this range, such as those higher than 0.3 mg/kg, may increase the risk of side effects without providing additional benefits in terms of sedation. Lower doses may not achieve the desired sedation depth for effective intubation. Therefore, administering Etomidate within this recommended range helps ensure optimal patient outcomes during the intubation process.

4. In diastolic heart failure, what is typically observed?

- A. Increased stroke volume
- B. Decreased ejection fraction
- C. Normal ejection fraction**
- D. Enlarged heart

Diastolic heart failure, also known as heart failure with preserved ejection fraction (HFpEF), is characterized primarily by the heart's inability to relax and fill adequately during diastole. In this condition, the ejection fraction, which measures the percentage of blood ejected from the heart during each contraction, remains normal (typically around 50% or more). This is a critical distinction; patients with diastolic heart failure have a preserved ejection fraction because the left ventricle is able to contract effectively but struggles with the filling phase due to stiffness or other issues affecting the myocardium. Normal ejection fraction in diastolic heart failure helps differentiate it from systolic heart failure, where the ejection fraction is typically decreased due to impaired myocardial contractility. Other features of diastolic heart failure may include symptoms of heart failure such as shortness of breath and fatigue, which arise due to the ventricle's inability to accommodate the returning blood volume, leading to fluid retention and increased pressures in the heart and lungs. It's important to note that while diastolic heart failure may present with an enlarged heart due to various compensatory mechanisms or underlying conditions, in itself, an enlarged heart is not a defining feature specifically attributed to di

5. Which receptor is specifically stimulated by phenylephrine?

- A. Beta 1
- B. Beta 2
- C. Alpha 1**
- D. Alpha 2

Phenylephrine specifically stimulates alpha-1 adrenergic receptors. When phenylephrine binds to these receptors, it leads to vasoconstriction, which can elevate blood pressure and reduce nasal congestion. This effect is particularly beneficial in clinical scenarios where a rapid increase in vascular tone is needed, such as in cases of hypotension.

Alpha-1 receptors are primarily located on vascular smooth muscle, and their stimulation leads to smooth muscle contraction and resultant vasoconstriction. This mechanism underpins the therapeutic uses of phenylephrine in managing conditions like hypotension during anesthesia and in decongestants. In contrast, stimulation of beta-1 receptors primarily impacts the heart and can result in increased heart rate and contractility, while beta-2 receptors mediate relaxation of smooth muscle in the bronchial passages and vascular beds. Alpha-2 receptors have a different role, mainly being inhibitory and primarily found in the central nervous system, where they modulate neurotransmitter release. Therefore, the specificity of phenylephrine for alpha-1 receptors supports its clinical applications in anesthesia and acute care management.

6. Which symptom is associated with systolic heart failure?

- A. Normal ejection fraction
- B. Enlarged heart**
- C. Normal heart size
- D. Normal stroke volume

Systolic heart failure, often referred to as heart failure with reduced ejection fraction, is characterized by the heart's inability to pump blood effectively during the contraction phase (systole). One of the physiological changes that occur in response to this impaired pumping ability is an enlargement of the heart, particularly the left ventricle. This enlargement, or dilation, occurs as the heart struggles to maintain adequate blood flow despite decreased contractility. In systolic heart failure, the ejection fraction, which measures the percentage of blood ejected from the heart with each contraction, is typically reduced. Therefore, a normal ejection fraction or normal stroke volume is not associated with this condition. Moreover, heart size is often not normal, as individuals with systolic heart failure frequently experience hypertrophy or dilation of the heart chambers due to the increased workload and compensatory mechanisms. The enlargement of the heart serves as a compensatory mechanism, allowing the heart to try to increase its output. However, this compensation eventually leads to further complications and worsens heart function over time. Thus, the association of an enlarged heart with systolic heart failure is a key characteristic that highlights the underlying pathophysiology of this condition.

7. A neonate has Apgar scores of 8 and 8. He is pink when actively crying, but cyanosis and retractions appear when he is quiet. What is the most likely diagnosis?

- A. Choanal atresia**
- B. Tracheoesophageal fistula**
- C. Pneumothorax**
- D. Congenital diaphragmatic hernia**

The scenario describes a neonate who has normal Apgar scores, indicating that the immediate transition to life after birth is satisfactory. However, the presence of cyanosis and retractions when the baby is quiet suggests a respiratory issue that manifests under specific circumstances, such as when the infant is not actively crying. Choanal atresia is a condition where the back of the nasal passage is blocked, usually by abnormal tissue, which can lead to respiratory distress, particularly when the infant is at rest or feeding. When the baby is crying, there is increased airflow that can temporarily relieve cyanosis, but once the baby becomes quiet, the obstruction can result in difficulty with breathing, leading to cyanosis and retractions. In contrast, the other conditions listed would likely present with different symptoms or patterns. For example, a tracheoesophageal fistula generally presents with feeding difficulties and significant respiratory distress. Pneumothorax would present with acute respiratory distress and often unilateral findings, while congenital diaphragmatic hernia typically leads to severe respiratory distress at birth, characterized by scaphoid abdomen and may not stabilize with crying. Thus, the clinical picture of cyanosis that resolves when the infant is active aligns well with choanal atresia, which is characterized

8. What is the main action of the drug milrinone in the context of heart failure treatment?

- A. Increases preload**
- B. Reduces heart rate**
- C. Improves cardiac contractility**
- D. Increases systemic vascular resistance**

Milrinone is a phosphodiesterase inhibitor that primarily acts to improve cardiac contractility. It does this by increasing the levels of cyclic AMP in myocardial cells, which enhances calcium influx during depolarization, ultimately leading to a stronger and more efficient contraction of the heart muscle. This action is particularly beneficial in the context of heart failure, where the heart's pumping ability is compromised. By improving contractility, milrinone helps to increase cardiac output and can provide symptomatic relief in patients with heart failure. The other options relate to different cardiovascular effects that milrinone does not predominantly produce. For instance, it does not significantly increase preload, as this could lead to volume overload, which is not desirable in heart failure management. It also does not primarily reduce heart rate; in fact, it can sometimes lead to a slight increase in heart rate due to enhanced contractility. Lastly, milrinone does not increase systemic vascular resistance; it tends to have a vasodilatory effect, which actually reduces afterload and can further assist in improving heart function. Therefore, the key action of milrinone in heart failure treatment is its ability to improve cardiac contractility.

9. What is the goal of the ACC/AHA preoperative cardiac assessment?

- A. To optimize nutritional status
- B. To identify patients at risk for cardiac complications during surgery**
- C. To assess patient psychological readiness
- D. To ensure adequate anesthesia depth

The primary goal of the ACC/AHA preoperative cardiac assessment is to identify patients at risk for cardiac complications during surgery. This process involves evaluating various factors such as the patient's clinical history, functional capacity, and existing comorbidities that may predispose them to perioperative cardiac events. By identifying these high-risk patients, healthcare providers can develop a tailored perioperative plan that may include further cardiac evaluations, optimizing medical therapy, or implementing specific monitoring strategies during surgery to mitigate the risk of complications. Understanding the patient's cardiac risk is critical in the preoperative setting, as it enables the surgical and anesthetic teams to take appropriate measures to enhance patient safety and outcomes. This includes making informed decisions regarding the choice of anesthetic technique and the need for postoperative monitoring or interventions based on the patient's cardiovascular status.

10. What should be done immediately after a failed intubation and inadequate two-handed mask ventilation?

- A. Call for help
- B. Insert an LMA**
- C. Attempt intubation again
- D. Begin bag-mask ventilation

In the context of airway management during anesthesia, following a failed intubation and inadequate two-handed mask ventilation, the appropriate immediate action is to insert a laryngeal mask airway (LMA). The LMA serves as a practical alternative airway management tool when conventional intubation methods fail and bag-mask ventilation is ineffective. The LMA allows for passive ventilation and provides a clear route for secure airway management without the need for a direct endotracheal tube position. This is vital in preventing hypoxia and maintaining patient safety while preparing for further airway management strategies. LMA insertion can facilitate oxygenation and ventilation until a more definitive airway solution can be identified or employed, such as reattempting intubation, which requires a stable and adequately ventilated patient. Thus, the LMA is an effective and immediate step in managing a critical situation where traditional ventilation methods have not succeeded, helping to ensure the patient's airway is managed appropriately.

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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