

AIR METHODS CRITICAL CARE PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
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 recommended IV infusion dose for dopamine in adults?**
 - A. 2-10 mcg/kg/min
 - B. 5-20 mcg/kg/min
 - C. 1-5 mcg/kg/min
 - D. 0.1-0.5 mcg/kg/min
- 2. Which lead is most effective for diagnosing ventricular tachycardia?**
 - A. Lead II
 - B. Lead V1
 - C. Lead V6
 - D. Lead III
- 3. When is it necessary to administer Rh negative globulin?**
 - A. When the mother is Rh positive and the fetus is Rh negative
 - B. When the mother is Rh negative and the fetus is Rh positive
 - C. When there is no central venous access
 - D. When the fetus is in distress
- 4. To optimize cerebral blood flow, CPP should be maintained at what level?**
 - A. Greater than 65 to 75 mm Hg
 - B. 70-90 mm Hg
 - C. 60-100 mm Hg
 - D. 50-70 mm Hg
- 5. A STEMI results from what type of blockage?**
 - A. Partial Occlusion of a coronary artery
 - B. Complete Occlusion of a coronary artery
 - C. Spasms in coronary vessels
 - D. Inadequate oxygen supply
- 6. What is the common cause of bradycardia in pediatrics?**
 - A. Hypoxia
 - B. Hypotension
 - C. Hypercalcemia
 - D. Heart block

- 7. In cardiogenic shock, which of the following hemodynamic parameters is typically increased?**
- A. Cardiac Output
 - B. Systemic Vascular Resistance (SVR)
 - C. Mean Arterial Pressure (MAP)
 - D. Central Venous Pressure (CVP)
- 8. What is the recommended bolus dose of heparin for acute coronary syndrome (ACS)?**
- A. 2000 units
 - B. 3000 units
 - C. 4000 units
 - D. 5000 units
- 9. What is the normal range for intracranial pressure (ICP)?**
- A. 5-10 mm Hg
 - B. 0-10 mm Hg
 - C. 0-15 mm Hg
 - D. 15-20 mm Hg
- 10. What is the purpose of administering lidocaine as a pretreatment in Rapid Sequence Intubation (RSI)?**
- A. To increase heart rate during intubation
 - B. To blunt sympathetic response to intubation
 - C. To decrease blood pressure
 - D. To enhance airway reflexes

Answers

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

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Explanations

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1. What is the recommended IV infusion dose for dopamine in adults?

- A. 2-10 mcg/kg/min
- B. 5-20 mcg/kg/min**
- C. 1-5 mcg/kg/min
- D. 0.1-0.5 mcg/kg/min

The recommended intravenous infusion dose for dopamine in adults typically falls within the range of 5-20 mcg/kg/min. This dosing range is used primarily for supporting cardiac output and improving renal perfusion, particularly in patients with conditions such as shock or heart failure. Dopamine acts on different adrenergic receptors depending on the dose. At lower doses (under 5 mcg/kg/min), dopamine primarily stimulates dopaminergic receptors, which can promote renal vasodilation. However, as the dose increases to 5 mcg/kg/min and above, the drug also begins to activate beta-adrenergic receptors, enhancing myocardial contractility and heart rate. At doses exceeding this infusion range, there is a risk of additional side effects, including vasoconstriction mediated by alpha-adrenergic activation. This careful balance in dosing is essential, as it maximizes the desired hemodynamic effects while minimizing potential adverse events. Hence, understanding the therapeutic window and pharmacologic profile of dopamine at different dosage levels is crucial for effective critical care management.

2. Which lead is most effective for diagnosing ventricular tachycardia?

- A. Lead II
- B. Lead V1**
- C. Lead V6
- D. Lead III

Lead V1 is considered the most effective lead for diagnosing ventricular tachycardia (VT) because it provides a unique view of the electrical activity occurring in the heart's right ventricle. Ventricular tachycardia typically manifests as wide QRS complexes on the ECG, and Lead V1 has a strategic position near the interventricular septum, allowing for better visualization of the morphology of these complexes, which can be critical in distinguishing VT from other arrhythmias. In Lead V1, the presence of an initial R wave or a predominant S wave can help clinicians determine the type of ventricular tachycardia and its origin. The characteristics displayed in Lead V1 can also indicate whether the VT is stemming from the right or left ventricle, as well as provide insights into potential underlying structural heart conditions. While other leads like Lead II, Lead V6, and Lead III are useful in various scenarios, they do not offer the same level of specificity and clarity regarding the rapid ventricular rhythms inherent in VT as Lead V1. Thus, Lead V1's position and capability to capture the morphology of the QRS complexes make it the most effective choice for diagnosing ventricular tachycardia.

3. When is it necessary to administer Rh negative globulin?

- A. When the mother is Rh positive and the fetus is Rh negative
- B. When the mother is Rh negative and the fetus is Rh positive**
- C. When there is no central venous access
- D. When the fetus is in distress

Administering Rh negative globulin, also known as Rh immunoglobulin (RhIg), is a critical intervention in obstetric care. It is necessary when the mother is Rh negative and the fetus is Rh positive. This situation poses a risk because if fetal Rh positive blood cells enter the maternal circulation, the mother's immune system may produce antibodies against the Rh factor. This process is known as sensitization. If a Rh negative mother becomes sensitized to Rh positive blood, it can lead to hemolytic disease of the newborn (HDN) in subsequent pregnancies. This condition can cause severe anemia, jaundice, and other serious health issues for the newborn. Administering RhIg during pregnancy and after delivery of a Rh positive infant can prevent the mother's immune response, thus protecting both her and future pregnancies. The other scenarios presented do not necessitate the administration of RhIg, as they do not involve the critical immunological conflict between an Rh negative mother and an Rh positive fetus.

4. To optimize cerebral blood flow, CPP should be maintained at what level?

- A. Greater than 65 to 75 mm Hg
- B. 70-90 mm Hg**
- C. 60-100 mm Hg
- D. 50-70 mm Hg

Maintaining a cerebral perfusion pressure (CPP) within the range of 70 to 90 mm Hg is crucial for ensuring adequate blood flow to the brain, especially in critically ill patients. This range is considered optimal because it supports the physiological requirements of cerebral tissues, helping to prevent ischemia and subsequent neurological deficits. When CPP is kept within this level, it allows for sufficient blood supply to meet the metabolic demands of brain cells. This is particularly important in patients with elevated intracranial pressure (ICP) or those suffering from traumatic brain injury, where compromised blood flow can exacerbate neurological damage. Levels below 70 mm Hg may not provide enough pressure to ensure perfusion, leading to potential complications, while levels above 90 mm Hg may increase the risk of cerebral edema and other adverse outcomes. Therefore, maintaining CPP within the 70 to 90 mm Hg range is essential for protecting brain function and optimizing outcomes in critical care settings.

5. A STEMI results from what type of blockage?

- A. Partial Occlusion of a coronary artery
- B. Complete Occlusion of a coronary artery**
- C. Spasms in coronary vessels
- D. Inadequate oxygen supply

A STEMI, or ST-Elevation Myocardial Infarction, occurs as a result of a complete occlusion of a coronary artery. This type of blockage typically arises when a thrombus (blood clot) forms on a ruptured atherosclerotic plaque, creating an obstruction that totally restricts blood flow to a portion of the heart muscle. When the blood supply is cut off entirely, the affected myocardial tissue begins to suffer from ischemia and, if not promptly treated, can lead to necrosis, resulting in significant heart damage. Understanding the nature of the blockage in a STEMI is crucial because it informs treatment decisions. In cases of total blockage, immediate interventions such as percutaneous coronary intervention (PCI) or thrombolytics are often required to restore blood flow and minimize heart damage. This specific type of blockage distinguishes STEMI from other forms of acute coronary syndromes, such as NSTEMI (Non-ST-Elevation Myocardial Infarction), which may be due to partial occlusions or other mechanisms that do not result in full loss of blood supply.

6. What is the common cause of bradycardia in pediatrics?

- A. Hypoxia
- B. Hypotension
- C. Hypercalcemia
- D. Heart block

Bradycardia in pediatrics is often associated with hypoxia because low oxygen levels can have a profound effect on heart rate regulation. When a child experiences hypoxia, the body attempts to preserve vital functions, which can lead to a decrease in heart rate as a compensatory mechanism. This is especially common in scenarios where the child is experiencing respiratory distress, obstructed airway, or conditions that affect oxygen delivery, such as severe asthma or pneumonia. Thus, the relationship between oxygen saturation and heart rate becomes particularly critical in the pediatric population, where the physiological response to hypoxia commonly manifests as bradycardia. While other factors such as hypotension, hypercalcemia, and heart block can lead to bradycardia, hypoxia is the most directly impactful and prevalent cause in this age group. Understanding this connection reinforces the importance of monitoring and managing oxygen levels in pediatric patients to prevent complications like dysrhythmias.

7. In cardiogenic shock, which of the following hemodynamic parameters is typically increased?

- A. Cardiac Output
- B. Systemic Vascular Resistance (SVR)
- C. Mean Arterial Pressure (MAP)
- D. Central Venous Pressure (CVP)

In cardiogenic shock, one of the hallmark features is the heart's inability to effectively pump blood, leading to decreased cardiac output. As a result, the body may compensate for the reduced blood flow by increasing venous return to the heart. This often results in elevated pressures in the venous system. Central Venous Pressure (CVP) reflects the pressure in the thoracic vena cava, which is indicative of the right atrial pressure and is mainly influenced by the volume of blood returning to the heart. In cases of cardiogenic shock, the right heart struggles to handle this increased volume, leading to higher CVP levels. Furthermore, while other parameters such as systemic vascular resistance (SVR) and mean arterial pressure (MAP) may also change in response to deterioration in cardiac function, the CVP is a direct measurement reflecting the increased volume and pressure in the venous system due to poor cardiac output and reduced pumping efficiency. Thus, increased CVP is a key aspect observed in the hemodynamic profile of patients experiencing cardiogenic shock.

8. What is the recommended bolus dose of heparin for acute coronary syndrome (ACS)?

- A. 2000 units
- B. 3000 units
- C. 4000 units**
- D. 5000 units

For acute coronary syndrome (ACS), a bolus dose of 4000 units of heparin is commonly recommended. This dosage is based on established protocols aimed at rapidly achieving therapeutic anticoagulation in the setting of ACS. Heparin is an important anticoagulant used to prevent further clot formation and to stabilize existing thrombi in patients experiencing acute coronary events. This larger initial bolus aims to quickly inhibit the coagulation cascade, which is crucial during the acute phase of coronary ischemia. Following the bolus, a continuous infusion of heparin is typically initiated to maintain the desired levels of anticoagulation. In clinical practice, the choice of bolus may vary based on individual patient factors, such as their weight, renal function, and the specifics of their clinical presentation, but 4000 units provides a robust starting point that is widely accepted in guidelines for the management of ACS.

9. What is the normal range for intracranial pressure (ICP)?

- A. 5-10 mm Hg
- B. 0-10 mm Hg
- C. 0-15 mm Hg**
- D. 15-20 mm Hg

The normal range for intracranial pressure (ICP) is 0-15 mm Hg. This range is critical for assessing brain health and function, as elevated ICP can lead to serious complications, including brain herniation and damage to neuronal tissue. Maintaining ICP within this range is essential for ensuring adequate cerebral perfusion and preventing ischemia. Within this normal range, the body is capable of regulating the pressure through various mechanisms, such as the absorption and production of cerebrospinal fluid (CSF), while also accommodating fluctuations that occur due to normal physiological activities. Monitoring ICP is a vital part of critical care, especially in patients who may have head injuries or other conditions affecting the brain.

10. What is the purpose of administering lidocaine as a pretreatment in Rapid Sequence Intubation (RSI)?

- A. To increase heart rate during intubation
- B. To blunt sympathetic response to intubation**
- C. To decrease blood pressure
- D. To enhance airway reflexes

Administering lidocaine as a pretreatment in Rapid Sequence Intubation (RSI) primarily serves to blunt the sympathetic response to intubation. During intubation, a patient can experience significant physiological stress, which often leads to an increase in heart rate, blood pressure, and other sympathetic nervous system responses. Lidocaine, being an anesthetic agent, helps to dampen this response by mitigating the irritative effects of intubation on the airway. This is particularly beneficial for patients who may have preexisting cardiovascular issues or who are at risk for adverse effects from increased sympathetic tone. By using lidocaine, the clinician aims to create a more stable hemodynamic environment, reducing the likelihood of complications associated with sympathetic overactivity during the procedure. This is crucial in an emergency or critical care setting, where maintaining patient stability is a priority. Other options might suggest effects unrelated to the primary purpose of lidocaine in this context.

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://airmethodscriticalcare.examzify.com>

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

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