

# Fundamentals of Critical Care Nursing (FCCN) level 1 Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

**Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.**

**ALL RIGHTS RESERVED.**

**No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.**

**Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.**

**SAMPLE**

# Table of Contents

<b>Copyright</b> .....	<b>1</b>
<b>Table of Contents</b> .....	<b>2</b>
<b>Introduction</b> .....	<b>3</b>
<b>How to Use This Guide</b> .....	<b>4</b>
<b>Questions</b> .....	<b>5</b>
<b>Answers</b> .....	<b>8</b>
<b>Explanations</b> .....	<b>10</b>
<b>Next Steps</b> .....	<b>16</b>

SAMPLE

# 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

SAMPLE

- 1. Which method is used to help ventilate a patient who is unable to breathe adequately?**
  - A. Oxygen mask**
  - B. BiPAP**
  - C. Nasal cannula**
  - D. Physical therapy**
  
- 2. A mean arterial pressure (MAP) of 60 indicates what about the cardiac output (CO) and systemic vascular resistance (SVR)?**
  - A. Always low CO and high SVR**
  - B. Can have high or low CO and high or low SVR**
  - C. Always high CO and low SVR**
  - D. Always low CO and low SVR**
  
- 3. Which laboratory value is typically low in cases of intrarenal failure?**
  - A. Urine sodium**
  - B. Specific gravity**
  - C. Blood urea nitrogen**
  - D. Creatinine**
  
- 4. Which of the following is a key factor in managing dialysis patients' dietary needs?**
  - A. Increase sodium intake**
  - B. Restriction of potassium intake**
  - C. Daily protein intake of any amount**
  - D. Unlimited fluid intake**
  
- 5. Which of the following is a characteristic of dihydropyridine calcium channel blockers?**
  - A. They primarily affect contractility**
  - B. They are used to treat bradyarrhythmias**
  - C. They are potent vasodilators**
  - D. They have significant effects on the AV node**

- 6. How should hypocalcemia be treated?**
- A. Oral calcium supplements**
  - B. IV calcium gluconate via central line**
  - C. Increased dietary calcium**
  - D. Dialysis**
- 7. What triggers the release of ADH?**
- A. High blood volume**
  - B. Low serum osmolality**
  - C. Low blood volume**
  - D. High atrial pressure**
- 8. What are the two leading causes of chronic kidney disease (CKD)?**
- A. Diabetes and hypertension**
  - B. Heart failure and diabetes**
  - C. Hypertension and hyperlipidemia**
  - D. Diabetes and cancer**
- 9. How should aspirin be administered during a myocardial infarction?**
- A. In liquid form**
  - B. Be prepared to give 4 chewable tablets**
  - C. As a whole tablet**
  - D. Intravenously only**
- 10. How many peripheral intravenous (PIV) sites should be established for a patient with myocardial infarction?**
- A. One**
  - B. Two**
  - C. Three**
  - D. Four**

## Answers

SAMPLE

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

SAMPLE

## **Explanations**

SAMPLE

**1. Which method is used to help ventilate a patient who is unable to breathe adequately?**

- A. Oxygen mask
- B. BiPAP**
- C. Nasal cannula
- D. Physical therapy

BiPAP, or Bilevel Positive Airway Pressure, is used to assist patients who are unable to breathe adequately by providing ventilatory support. This non-invasive ventilation method delivers two levels of pressure: a higher pressure during inhalation (to assist with taking in air) and a lower pressure during exhalation (to facilitate breathing out). This can improve oxygenation and reduce the work of breathing, making it effective for patients with various respiratory conditions such as acute respiratory distress, chronic obstructive pulmonary disease (COPD) exacerbations, or pulmonary edema. In contrast, while an oxygen mask and nasal cannula provide supplemental oxygen, they do not assist with ventilation in cases where there is a fundamental difficulty in breathing or an inadequate respiratory effort. Oxygen masks deliver oxygen at a certain concentration, and nasal cannulas provide a lower amount of supplemental oxygen but do not exert pressure to assist in inhalation or exhalation. Physical therapy, while beneficial for mobilizing secretions and improving overall lung function, does not directly provide the ventilatory support that BiPAP offers. Thus, BiPAP is specifically designed to help ventilate patients experiencing respiratory failure or insufficient ventilation.

**2. A mean arterial pressure (MAP) of 60 indicates what about the cardiac output (CO) and systemic vascular resistance (SVR)?**

- A. Always low CO and high SVR
- B. Can have high or low CO and high or low SVR**
- C. Always high CO and low SVR
- D. Always low CO and low SVR

A mean arterial pressure (MAP) of 60 mmHg does not provide a definitive indication of cardiac output (CO) or systemic vascular resistance (SVR) on its own. MAP is influenced by both CO and SVR, as it can be calculated using the formula:  $MAP = CO \times SVR$ . With a MAP of 60, it is possible to have variations in both CO and SVR. For instance, a low CO can contribute to a decreased MAP if the body cannot compensate effectively by increasing SVR. Conversely, if SVR is high, it can also help maintain a MAP of 60 even when CO is lower. Therefore, with such a MAP figure, both CO and SVR are not fixed to high or low values and can vary independently. This interplay explains why a MAP reading does not necessarily correlate to a specific state of CO and SVR, allowing for both high or low values in each case. Recognizing the complex interaction between these parameters is vital for clinicians managing critically ill patients, where maintaining an optimal MAP is crucial for ensuring adequate tissue perfusion and organ function.

**3. Which laboratory value is typically low in cases of intrarenal failure?**

- A. Urine sodium**
- B. Specific gravity**
- C. Blood urea nitrogen**
- D. Creatinine**

In cases of intrarenal failure, the specific gravity of urine is typically low. This condition indicates that the kidneys are unable to concentrate urine effectively, leading to a more diluted urine output. In intrarenal failure, which is often caused by damage to the renal tubules or the glomeruli, the kidney's ability to reabsorb water and solutes is impaired. As a result, the specific gravity, which measures the concentration of solutes in urine, decreases. Low specific gravity reflects the kidneys' inability to conserve water due to impaired renal function. Normal kidneys can concentrate urine by reabsorbing water based on the body's hydration status, but in intrarenal failure, this process is compromised. In contrast, urine sodium levels may not be significantly altered, and both blood urea nitrogen and creatinine values typically rise due to impaired renal function and hindered waste elimination, rather than being low. Thus, the specific gravity being low serves as a key indicator in diagnosing and understanding the effects of intrarenal failure on kidney function.

**4. Which of the following is a key factor in managing dialysis patients' dietary needs?**

- A. Increase sodium intake**
- B. Restriction of potassium intake**
- C. Daily protein intake of any amount**
- D. Unlimited fluid intake**

Managing the dietary needs of dialysis patients is crucial because it helps prevent complications associated with renal failure and maximizes the effectiveness of the dialysis process. One of the key factors in this management is the restriction of potassium intake. In patients undergoing dialysis, the kidneys are unable to effectively excrete potassium, leading to an increased risk of hyperkalemia, which can cause serious cardiac issues. Therefore, dietary modifications that limit potassium consumption are essential. Foods high in potassium, such as bananas, oranges, potatoes, and tomatoes, should be consumed in moderation or avoided to maintain safe potassium levels in the body. In contrast, the other options do not align with the dietary needs of dialysis patients. Increasing sodium intake is generally not recommended as it can lead to hypertension and fluid retention, which are detrimental to these patients. A daily protein intake of any amount is not advisable; while protein is necessary for health, patients on dialysis often require a controlled protein intake to manage nitrogen waste and prevent overload. Lastly, unlimited fluid intake is contraindicated because it can result in fluid overload, leading to complications such as hypertension and heart failure. Ensuring fluid balance is critical in the management of dialysis patients, making fluid intake a key aspect of dietary guidelines.

**5. Which of the following is a characteristic of dihydropyridine calcium channel blockers?**

- A. They primarily affect contractility**
- B. They are used to treat bradyarrhythmias**
- C. They are potent vasodilators**
- D. They have significant effects on the AV node**

Dihydropyridine calcium channel blockers are characterized by their potent vasodilatory effects. These medications, such as amlodipine and nifedipine, primarily work by selectively blocking calcium channels in vascular smooth muscle, which leads to relaxation of blood vessels and a decrease in systemic vascular resistance. This vasodilation results in lower blood pressure, making dihydropyridines useful in the management of hypertension and certain types of angina. In contrast to dihydropyridines, non-dihydropyridine calcium channel blockers, like verapamil and diltiazem, have more significant effects on cardiac contractility and heart rate, particularly through their action on the AV node and other cardiac tissues. This is why they may be more commonly used to treat certain types of arrhythmias and can affect the heart rate more directly. Thus, the defining trait of dihydropyridines is their ability to serve as potent vasodilators, primarily influencing blood vessel tension rather than directly altering cardiac contractility or heart rhythm.

**6. How should hypocalcemia be treated?**

- A. Oral calcium supplements**
- B. IV calcium gluconate via central line**
- C. Increased dietary calcium**
- D. Dialysis**

Hypocalcemia, which is a condition characterized by low levels of calcium in the blood, can be acute or chronic. In cases of severe hypocalcemia, immediate treatment is essential to prevent serious complications such as cardiac dysrhythmias or neurological disturbances. The administration of intravenous calcium gluconate via a central line is considered an effective treatment for severe hypocalcemia, especially when rapid correction is necessary. Calcium gluconate works quickly to increase serum calcium levels and is preferred in acute settings, particularly when patient safety is a primary concern, given its efficacy and relatively lower risk of side effects compared to other calcium formulations. Administering calcium via central line also allows for rapid administration and reduces the likelihood of local tissue irritation that can occur with peripheral administration. While oral supplements and dietary adjustments may be effective for mild hypocalcemia or for long-term management, they do not provide the immediate correction needed in urgent situations. Similarly, dialysis is typically reserved for patients with renal failure or where there is a need to correct electrolyte imbalances in severe kidney disease, rather than being a first-line treatment for hypocalcemia itself.

## 7. What triggers the release of ADH?

- A. High blood volume
- B. Low serum osmolality
- C. Low blood volume**
- D. High atrial pressure

The release of Antidiuretic Hormone (ADH), also known as vasopressin, is primarily triggered by low blood volume. When the body senses a decrease in blood volume—whether due to dehydration, blood loss, or other factors—it activates the osmoreceptors in the hypothalamus that signal the posterior pituitary gland to release ADH. ADH then helps the kidneys retain water, which in turn increases blood volume and helps to restore homeostasis. This response is vital in maintaining fluid balance and blood pressure, as a low blood volume signals the need for conservation of fluids to prevent further volume depletion. In contrast, high blood volume, low serum osmolality, and high atrial pressure would typically signal a state of excess fluid in the body. In such scenarios, ADH release would be suppressed to allow for increased water excretion, thus reducing blood volume and serum osmolality. Understanding these physiological mechanisms emphasizes the importance of ADH in the body's fluid regulation processes, especially in critical care settings where balancing blood volume is crucial.

## 8. What are the two leading causes of chronic kidney disease (CKD)?

- A. Diabetes and hypertension**
- B. Heart failure and diabetes
- C. Hypertension and hyperlipidemia
- D. Diabetes and cancer

The two leading causes of chronic kidney disease (CKD) are diabetes and hypertension. Diabetes, particularly type 2 diabetes, leads to CKD primarily due to high blood sugar levels causing damage to the blood vessels in the kidneys over time. This damage affects the kidneys' ability to filter waste and excess fluids from the blood, resulting in their gradual decline in function. Hypertension, or high blood pressure, is another significant contributor to CKD. Prolonged high blood pressure can cause damage to the kidneys' blood vessels, further compromising their filtering ability. The relationship between CKD and these conditions is critical, as poorly managed diabetes and hypertension can exacerbate kidney damage and progression of the disease. Other options present causes that are not as closely linked to CKD. While heart failure and diabetes can coexist as complications of systemic issues, heart failure itself is not a primary cause of CKD. Similarly, hyperlipidemia is a risk factor for cardiovascular disease rather than a direct cause of CKD. Lastly, while cancer may impact kidney function, it is not a leading cause of CKD compared to diabetes and hypertension.

**9. How should aspirin be administered during a myocardial infarction?**

- A. In liquid form**
- B. Be prepared to give 4 chewable tablets**
- C. As a whole tablet**
- D. Intravenously only**

Administering aspirin during a myocardial infarction is crucial for its antiplatelet effects, which can help to prevent further clot formation in the coronary arteries. Chewable aspirin is preferred due to its rapid absorption and the quick action it provides in reducing platelet aggregation. Chewing the tablets helps facilitate faster entry into the systemic circulation compared to swallowing whole tablets, which may take longer to dissolve and be absorbed. Giving four chewable tablets is in line with the recommended dosing during an acute coronary event. This dosing typically amounts to about 325 mg of aspirin, which is effective in the initial management of a myocardial infarction. Liquid forms may not be preferred as they are not as commonly available in emergency settings and the chewable tablets are specifically designed for quick absorption. Administering as a whole tablet can delay the drug's effect because it may take longer for the body to break it down. Intravenous administration is also not standard for aspirin in this situation, as the oral route is both effective and sufficient for the immediate needs in the context of a heart attack.

**10. How many peripheral intravenous (PIV) sites should be established for a patient with myocardial infarction?**

- A. One**
- B. Two**
- C. Three**
- D. Four**

In the context of a patient with a myocardial infarction, establishing two peripheral intravenous (PIV) sites is considered best practice. This approach facilitates rapid access for potential medications and fluids that may be needed urgently during treatment, enabling timely interventions such as the administration of thrombolytics, anticoagulants, and other critical medications. Having two PIV sites is beneficial in emergency situations where swift action is necessary. It provides an additional access point in case one site fails or if a higher volume of fluids or multiple medications needs administration simultaneously. This is especially crucial in a cardiac emergency, where every second counts, and multiple infusions may be required to stabilize the patient's condition. While one PIV site might be adequate in some scenarios, it does not offer the same reassurance and preparedness as having two. When dealing with serious conditions such as myocardial infarction, ensuring robust venous access is a priority for effective management and treatment of the patient's needs.

## 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://fccnlevel1.examzify.com>**

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

SAMPLE