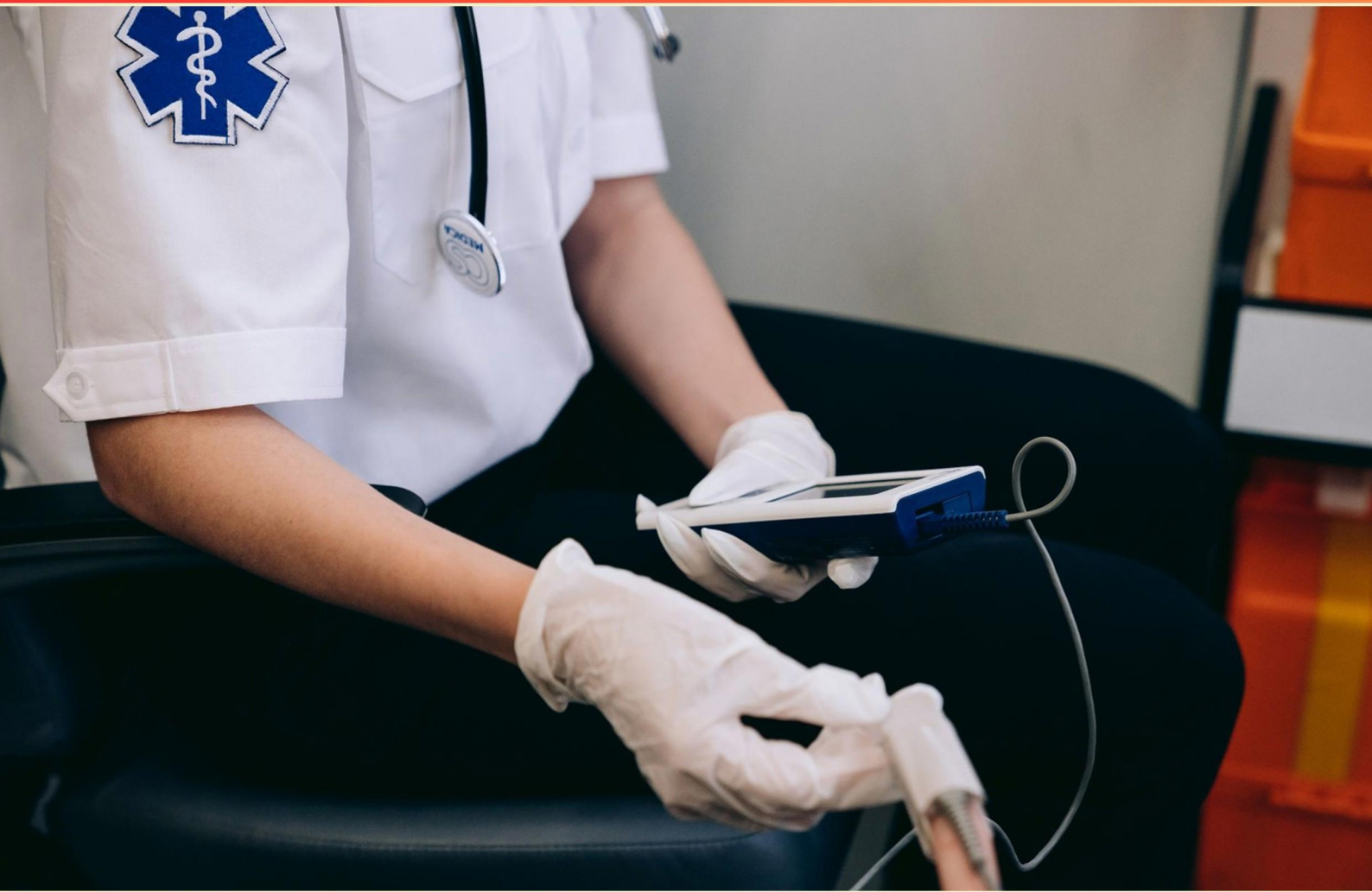


CARDIAC MEDICINE CERTIFICATION (CMC) PRACTICE EXAM (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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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. Which of the following is a common risk factor for coronary artery disease?**
 - A. High fiber diet
 - B. Regular exercise
 - C. Obesity
 - D. Low blood pressure

- 2. Identify a common first-line medication for managing acute pulmonary edema.**
 - A. Metoprolol
 - B. Furosemide (Lasix)
 - C. Aspirin
 - D. Diltiazem

- 3. What does the administration of diuretics lead to in regards to sodium?**
 - A. Increased sodium levels
 - B. Natriuresis and diuresis
 - C. Enhanced sodium absorption
 - D. Improved renal filtration of sodium

- 4. Which of the following is NOT a complication associated with an inferior wall myocardial infarction?**
 - A. Bradycardia
 - B. First-degree heart block
 - C. Pulmonary embolism
 - D. Papillary muscle rupture

- 5. What should be monitored in patients receiving digoxin therapy?**
 - A. Platelet count and liver enzymes
 - B. Serum digoxin levels and renal function
 - C. Electrolyte levels and blood glucose
 - D. Heart rate and blood pressure

- 6. What parameter is monitored during a stress test?**
- A. Blood pressure response
 - B. Exercise tolerance and heart rate response
 - C. Electrolyte balance
 - D. Ventilation-perfusion ratio
- 7. How long after the onset of myocardial infarction symptoms does troponin typically begin to rise?**
- A. 1-2 hours
 - B. 3-5 hours
 - C. 10-12 hours
 - D. 24-48 hours
- 8. What does a prolonged elevated troponin level indicate post-myocardial infarction?**
- A. Transient ischemia
 - B. Stable angina
 - C. Extended myocardial injury
 - D. Routine laboratory error
- 9. Which condition is indicated by a first-degree AV block?**
- A. Conduction delay between the SA node and the atria
 - B. Conduction delay between the SA node and the ventricles
 - C. Complete blockage in the conduction system
 - D. Asynchronous contraction of the atria and ventricles
- 10. Which BNP level indicates heart failure?**
- A. Less than 50 pg/mL
 - B. Less than 100 pg/mL
 - C. Greater than 100 pg/mL
 - D. Greater than 200 pg/mL

Answers

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

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Explanations

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1. Which of the following is a common risk factor for coronary artery disease?

- A. High fiber diet
- B. Regular exercise
- C. Obesity**
- D. Low blood pressure

Obesity is a well-established risk factor for coronary artery disease because it is associated with various metabolic abnormalities that can lead to cardiovascular complications. Individuals with obesity are more likely to experience insulin resistance, increased inflammation, and dyslipidemia—conditions that contribute to the development of atherosclerosis. Additionally, excess body fat can lead to high blood pressure and elevated levels of cholesterol and triglycerides, further increasing the risk of coronary artery disease. In contrast, a high-fiber diet and regular exercise are considered protective factors against coronary artery disease. A diet rich in fiber helps to lower cholesterol levels and improve overall heart health. Regular physical activity is known to assist in weight management, improve blood circulation, and decrease the risk of developing heart disease. Low blood pressure, while often an indicator of good cardiovascular health, does not typically function as a risk factor for coronary artery disease; rather, it is usually an asset reflecting overall health and homeostasis.

2. Identify a common first-line medication for managing acute pulmonary edema.

- A. Metoprolol
- B. Furosemide (Lasix)**
- C. Aspirin
- D. Diltiazem

Furosemide, commonly known by its brand name Lasix, is a powerful loop diuretic that is frequently used as a first-line medication for managing acute pulmonary edema. This condition occurs when fluid accumulates in the lungs, often due to heart failure or other cardiovascular issues, leading to difficulty breathing and decreased oxygenation. The mechanism of action of furosemide involves inhibiting the reabsorption of sodium and chloride in the ascending loop of Henle in the kidneys. This results in increased urinary output, which helps to reduce excess fluid volume in the body. By promoting diuresis, furosemide effectively decreases the volume of fluid in the lungs, alleviating symptoms of pulmonary edema and improving respiratory function. Additionally, furosemide can help reduce the preload on the heart by eliminating extracellular fluid, which is crucial in patients who may be experiencing cardiogenic pulmonary edema. The rapid onset of action of this medication also plays a significant role in emergency situations, where quick relief of symptoms can be lifesaving. In contrast, the other medications listed have different primary functions. Metoprolol is a beta-blocker primarily used to manage hypertension and heart rate but is not indicated for acute fluid management. Aspirin is an ant

3. What does the administration of diuretics lead to in regards to sodium?

- A. Increased sodium levels
- B. Natriuresis and diuresis**
- C. Enhanced sodium absorption
- D. Improved renal filtration of sodium

The administration of diuretics primarily triggers the processes of natriuresis and diuresis. Diuretics work by promoting the excretion of sodium in the urine; this process, known as natriuresis, leads to increased levels of sodium being expelled from the body. As sodium is excreted, water follows due to osmosis, resulting in diuresis, which is the increased production of urine. By targeting various pathways within the renal system, such as inhibiting sodium reabsorption in the nephron, diuretics effectively decrease the total body sodium content and fluid volume. This is particularly useful in managing conditions like hypertension, heart failure, and edema, where excess sodium and fluid retention are detrimental. Through their mechanism, diuretics accomplish the dual effect of promoting sodium loss and consequently increasing urine output.

4. Which of the following is NOT a complication associated with an inferior wall myocardial infarction?

- A. Bradycardia
- B. First-degree heart block
- C. Pulmonary embolism**
- D. Papillary muscle rupture

The correct choice identifies pulmonary embolism as a complication that is NOT typically associated with an inferior wall myocardial infarction. An inferior wall myocardial infarction primarily affects the right coronary artery, leading to various complications related to cardiac conduction and structural integrity. Bradycardia and first-degree heart block are common complications due to the proximity of the affected area to the atrioventricular (AV) node, which can be susceptible to ischemia. In inferior wall infarctions, especially those involving significant damage, the heart's electrical conduction system may be compromised, resulting in slower heart rates (bradycardia) or prolonged conduction times (first-degree heart block). Papillary muscle rupture can occur following a myocardial infarction, including those of the inferior wall, leading to acute mitral valve insufficiency. This is due to the papillary muscles being supplied by arteries that can be compromised during an inferior wall infarction, causing them to rupture and severely impact cardiac function. In contrast, pulmonary embolism is not a direct complication of inferior wall myocardial infarction. Pulmonary embolism arises from deep vein thrombosis or other sources and affects the lungs rather than directly stemming from myocardial or cardiac complications. Thus, it does not fit the context of complications arising from an inferior

5. What should be monitored in patients receiving digoxin therapy?

- A. Platelet count and liver enzymes
- B. Serum digoxin levels and renal function**
- C. Electrolyte levels and blood glucose
- D. Heart rate and blood pressure

Monitoring serum digoxin levels and renal function in patients receiving digoxin therapy is crucial for several reasons. Digoxin has a narrow therapeutic index, which means that the difference between an effective dose and a toxic dose is very small. Regular monitoring of serum digoxin levels helps ensure that patients remain within the therapeutic range, as both subtherapeutic levels and toxicity can lead to serious complications. Additionally, renal function is particularly important because digoxin is primarily eliminated by the kidneys. Impaired renal function can lead to accumulation of digoxin in the body, increasing the risk of toxicity. Thus, monitoring renal function helps in adjusting the dosage appropriately and ensures patient safety during digoxin therapy. In contrast, while monitoring platelet count and liver enzymes, electrolyte levels and blood glucose, or heart rate and blood pressure can provide valuable information about a patient's overall health or other specific conditions, they do not directly address the critical aspects of digoxin therapy. Monitoring the serum digoxin levels and renal function is essential for optimizing therapy and preventing adverse effects specifically related to digoxin.

6. What parameter is monitored during a stress test?

- A. Blood pressure response
- B. Exercise tolerance and heart rate response**
- C. Electrolyte balance
- D. Ventilation-perfusion ratio

During a stress test, one of the primary parameters monitored is exercise tolerance along with heart rate response. This procedure assesses how well the heart functions under physical stress, typically induced by exercise on a treadmill or stationary bike. The heart rate response provides crucial information on the heart's ability to increase cardiac output and maintain adequate circulation during exertion. Additionally, observing exercise tolerance helps to determine a patient's physical fitness level as well as identify any potential cardiovascular abnormalities. Changes in heart rate indicate how well the heart pumps blood, while the patient's ability to tolerate the exercise duration reflects overall cardiovascular health. While monitoring blood pressure response is also important during a stress test, it is secondary to the combined assessment of exercise tolerance and heart rate response, which offer a more comprehensive insight into cardiac function during physical activity. Other options like electrolyte balance and ventilation-perfusion ratio are relevant to cardiopulmonary health but are not primary parameters during standard cardiac stress testing.

7. How long after the onset of myocardial infarction symptoms does troponin typically begin to rise?

- A. 1-2 hours
- B. 3-5 hours**
- C. 10-12 hours
- D. 24-48 hours

Troponin is a key biomarker in the diagnosis of myocardial infarction, and its levels in the blood begin to rise in relation to cardiac muscle damage. Typical clinical guidelines indicate that troponin can start to increase approximately 3 to 5 hours after the onset of myocardial infarction symptoms. This time frame is significant because it allows clinicians to utilize troponin tests effectively in the context of acute chest pain, aiding in diagnosis. The reason this timing is crucial is that troponin release correlates with the damage to the cardiac muscle cells, which begins shortly after ischemia occurs. By approximately 3 to 5 hours, the myocardial injury is substantial enough to cause detectable increases in troponin levels. This ensures that healthcare providers can make informed decisions regarding treatment, especially in the urgent setting of a suspected heart attack. Understanding this timeline helps in differentiating a recent myocardial infarction from other causes of chest pain. For instance, while other biomarkers might rise sooner or later, troponin's specificity for cardiac injury and its rising pattern make it a vital tool in acute cardiac care.

8. What does a prolonged elevated troponin level indicate post-myocardial infarction?

- A. Transient ischemia
- B. Stable angina
- C. Extended myocardial injury**
- D. Routine laboratory error

A prolonged elevated troponin level following a myocardial infarction indicates extended myocardial injury. Troponin is a protein released into the bloodstream when the heart muscle is damaged, and its elevation is a critical marker for the diagnosis of myocardial infarction. After the initial injury that occurs during the infarct, troponin levels typically rise within a few hours, peak within 24-48 hours, and then gradually decline. However, if troponin levels remain elevated beyond the expected timeframe, it suggests that there is ongoing or extended injury to the myocardial tissue, potentially due to complications such as reperfusion injury, additional ischemic episodes, or cardiac strain. This prolonged elevation indicates that the heart muscle is continuing to suffer damage or stress, as opposed to transient ischemia, which would typically result in temporary troponin elevations that normalize once blood flow returns to normal. Similarly, stable angina is characterized by episodes of chest pain related to a predictable level of activity without resulting in significant myocardial injury or prolonged troponin elevation. Lastly, while laboratory errors can occasionally cause discrepancies in troponin levels, a consistent and prolonged elevation in the context of a myocardial infarction is far more indicative of continued myocardial pathophysiology rather than a routine error.

9. Which condition is indicated by a first-degree AV block?

- A. Conduction delay between the SA node and the atria
- B. Conduction delay between the SA node and the ventricles**
- C. Complete blockage in the conduction system
- D. Asynchronous contraction of the atria and ventricles

A first-degree AV block is characterized by a prolonged PR interval on an electrocardiogram (ECG), which signifies a delay in the conduction from the atria to the ventricles through the atrioventricular (AV) node. In this context, the correct answer reflects that there is noticeable conduction delay occurring specifically between the SA node and the ventricles. This means that while the electrical impulses from the SA node are still reaching the ventricles, the time taken for this conduction is longer than normal, resulting in a significant but not complete interruption of the conduction pathway. The other conditions described do not accurately represent a first-degree AV block. For instance, a complete blockage would imply a more severe interruption of the conduction system than what is seen in a first-degree block, and asynchronous contraction refers to a lack of coordination between the atria and ventricles, which is not a characteristic of this type of block. Also, there is no direct conduction delay between the SA node and the atria in the context of a first-degree AV block, as the primary issue centers on the slowing of conduction from the AV node to the ventricles.

10. Which BNP level indicates heart failure?

- A. Less than 50 pg/mL
- B. Less than 100 pg/mL
- C. Greater than 100 pg/mL**
- D. Greater than 200 pg/mL

A B-type natriuretic peptide (BNP) level greater than 100 pg/mL is typically indicative of heart failure. BNP is a hormone produced by your heart in response to stretching of the heart chambers, which often occurs when heart failure develops. When heart failure is present, the levels of BNP in the bloodstream rise, reflecting the increased stress and volume overload on the heart. The threshold of 100 pg/mL is clinically significant because levels above this point suggest that heart failure is likely, especially when considered alongside a patient's clinical presentation and symptoms. Although other conditions can also elevate BNP levels, such as renal failure or pulmonary issues, a level above 100 pg/mL is consistently used to raise suspicion for heart failure. Lower levels, such as those under 100 pg/mL, typically indicate that heart failure is less likely and can help differentiate it from other causes of dyspnea. Thus, recognizing a BNP level greater than 100 pg/mL plays a critical role in the assessment and management of patients suspected of experiencing heart failure.

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://cmc-certification.examzify.com>

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

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