

Cardiac Medicine Certification (CMC) 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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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

- 1. What is the role of Epinephrine in the cardiovascular system?**
 - A. Causes systemic vasodilation**
 - B. Decreases heart rate**
 - C. Increases cardiac output**
 - D. Inhibits cardiac beta-receptors**
- 2. Which medication is classified as an Angiotensin II Receptor Blocker (ARB)?**
 - A. Enalapril**
 - B. Lisinopril**
 - C. Losartan**
 - D. Captopril**
- 3. What drug classifications are typically contraindicated in patients with second-degree AV block?**
 - A. Diuretics and anticoagulants**
 - B. Calcium channel blockers and beta-blockers**
 - C. NSAIDs and corticosteroids**
 - D. ACE inhibitors and ARBs**
- 4. What is the effect of team-based care in managing heart failure?**
 - A. Reduces hospital readmissions**
 - B. Increases medication dosages**
 - C. Limits patient education**
 - D. Complicates communication within the team**
- 5. 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**

- 6. What is performed when right ventricular involvement is suspected during an inferior wall MI?**
- A. Standard 12-lead EKG**
 - B. Right-sided EKG**
 - C. Transesophageal echocardiogram**
 - D. Cardiac catheterization**
- 7. How is ventricular tachycardia characterized?**
- A. Heart rate between 60 and 100 bpm**
 - B. Multiple PVCs at a rate of 100 to 250 bpm**
 - C. Regular p-wave to QRS ratio**
 - D. Presence of sinus bradycardia**
- 8. What should be done if a patient loses consciousness due to ventricular tachycardia?**
- A. Immediate administration of oral medications**
 - B. Defibrillation and CPR**
 - C. Monitoring vital signs only**
 - D. Wait for natural recovery**
- 9. When should ischemia-modified albumin levels return to normal after correction of ischemia?**
- A. 1-2 hours**
 - B. 6-12 hours**
 - C. 24 hours**
 - D. 48 hours**
- 10. Which heart valve is most commonly affected by rheumatic fever?**
- A. Aortic valve**
 - B. Tricuspid valve**
 - C. Mitral valve**
 - D. Pulmonic valve**

Answers

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

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Explanations

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1. What is the role of Epinephrine in the cardiovascular system?

- A. Causes systemic vasodilation**
- B. Decreases heart rate**
- C. Increases cardiac output**
- D. Inhibits cardiac beta-receptors**

Epinephrine plays a significant role in the cardiovascular system primarily by increasing cardiac output, which is achieved through multiple mechanisms. It acts on beta-1 adrenergic receptors in the heart, leading to an increase in heart rate (positive chronotropic effect) and an increase in the force of contraction (positive inotropic effect). This dual action enhances the heart's ability to pump blood more effectively, resulting in improved cardiac output. Additionally, epinephrine also stimulates beta-2 adrenergic receptors in vascular smooth muscle, which can lead to vasodilation in certain vascular beds. However, its predominant effect in acute settings is the overall increase in cardiac output due to the increased heart rate and contractility, making it a vital component in addressing cardiovascular challenges, particularly during shock or cardiac arrest. The other options do not accurately reflect the role of epinephrine in the cardiovascular system. For instance, systemic vasodilation is not the primary action of epinephrine; instead, it often causes systemic vasoconstriction in most vascular territories, particularly at higher doses. Furthermore, epinephrine does not decrease heart rate; it typically increases it. Inhibiting cardiac beta-receptors is contrary to the action of epinephrine, as it stimulates these

2. Which medication is classified as an Angiotensin II Receptor Blocker (ARB)?

- A. Enalapril**
- B. Lisinopril**
- C. Losartan**
- D. Captopril**

Losartan is classified as an Angiotensin II Receptor Blocker (ARB) because it selectively inhibits the action of angiotensin II, a hormone that plays a pivotal role in regulating blood pressure and fluid balance in the body. By blocking the receptors that angiotensin II binds to, Losartan helps to relax blood vessels, lower blood pressure, and reduce the workload on the heart. In contrast, the other medications listed are all classified as ACE inhibitors, which function by inhibiting the angiotensin-converting enzyme (ACE). This enacts a different mechanism of action that ultimately reduces levels of angiotensin II, but does not specifically block its receptors as Losartan does. This distinction is crucial for understanding the pharmacological differences in managing conditions such as hypertension and heart failure.

3. What drug classifications are typically contraindicated in patients with second-degree AV block?

- A. Diuretics and anticoagulants**
- B. Calcium channel blockers and beta-blockers**
- C. NSAIDs and corticosteroids**
- D. ACE inhibitors and ARBs**

In patients with second-degree atrioventricular (AV) block, it is important to avoid specific drug classifications that can further impair cardiac conduction. Calcium channel blockers and beta-blockers are typically contraindicated in these patients because both classifications can have negative effects on heart rate and AV conduction. Calcium channel blockers, particularly non-dihydropyridines like verapamil and diltiazem, decrease the rate of conduction through the AV node. This is problematic in patients with second-degree AV block, where there is already an existing issue with electrical conduction between the atria and ventricles. Similarly, beta-blockers also slow down heart rate and can worsen the conduction delay, potentially leading to more severe blocks or even complete heart block. The other drug classifications mentioned do not have the same impact on AV conduction. Diuretics and anticoagulants primarily target fluid balance and blood clots, respectively, rather than directly influencing heart rhythm. NSAIDs and corticosteroids primarily offer anti-inflammatory effects and do not significantly affect cardiac conduction pathways. ACE inhibitors and angiotensin receptor blockers (ARBs) are primarily used for managing hypertension and heart failure, and they do not directly interact with AV nodal conduction. Thus, they are generally not contraindicated.

4. What is the effect of team-based care in managing heart failure?

- A. Reduces hospital readmissions**
- B. Increases medication dosages**
- C. Limits patient education**
- D. Complicates communication within the team**

Team-based care in managing heart failure has been shown to significantly reduce hospital readmissions. This approach leverages a multi-disciplinary team of healthcare professionals—including physicians, nurses, pharmacists, dietitians, and social workers—who collaborate to provide comprehensive care. By coordinating treatment plans, closely monitoring patient progress, and addressing various needs such as medication management, lifestyle modifications, and emotional support, the team can enhance patient outcomes. This collaborative effort is particularly effective in heart failure management, as patients often require ongoing support and education to manage their condition effectively. With a team in place, interventions can be tailored to individual patient needs, leading to better adherence to treatment plans and more timely adjustments based on the patient's evolving condition. Consequently, these efforts contribute to lowering the incidence of readmissions due to exacerbations of heart failure, as patients are more likely to receive the necessary guidance and support to manage their symptoms effectively outside of a hospital setting. The other options do not align with the established benefits of team-based care in this context. Increasing medication dosages without adequate monitoring and communication could potentially lead to adverse effects rather than improved outcomes. Limiting patient education runs counter to the goals of team-based care, which emphasizes empowering patients with knowledge to manage their health. Lastly,

5. 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.

6. What is performed when right ventricular involvement is suspected during an inferior wall MI?

- A. Standard 12-lead EKG**
- B. Right-sided EKG**
- C. Transesophageal echocardiogram**
- D. Cardiac catheterization**

When right ventricular involvement is suspected during an inferior wall myocardial infarction (MI), a right-sided EKG is performed. This specialized form of electrocardiography is essential because standard 12-lead EKGs may not adequately visualize the right ventricular leads and could miss ST-segment elevations indicative of right ventricular ischemia. Inferior wall MIs, which primarily affect the posterior descending artery, can sometimes extend to include the right coronary artery territory, leading to potential right ventricular damage. The right-sided EKG places additional leads on the right side of the chest to enhance visibility of the right ventricular activity. This can help in identifying significant changes, such as ST elevation in the right precordial leads (V3R, V4R), which can suggest right ventricular MI, thereby guiding immediate management and treatment.

7. How is ventricular tachycardia characterized?

- A. Heart rate between 60 and 100 bpm
- B. Multiple PVCs at a rate of 100 to 250 bpm**
- C. Regular p-wave to QRS ratio
- D. Presence of sinus bradycardia

Ventricular tachycardia is characterized primarily by the presence of multiple premature ventricular contractions (PVCs) occurring at a rapid rate, specifically between 100 and 250 beats per minute. This arrhythmia originates from the ventricles, and the rapid firing of the ventricular ectopic pacemakers leads to this elevated heart rate. The distinguishing feature of ventricular tachycardia is that it often has a wide QRS complex, reflecting the abnormal conduction pathway through the ventricles due to the ectopic focus. When observing patients with this tachycardia, one may notice that the rhythm is typically regular, and the QRS complexes are usually wider than those seen in normal sinus rhythm. In contrast, the other options provided do not accurately represent ventricular tachycardia. A heart rate between 60 and 100 beats per minute indicates a normal sinus rhythm rather than tachycardia. The regular p-wave to QRS ratio is typically present in normal rhythms but is absent in ventricular tachycardia, where atrial activity may be dissociated from ventricular contractions. Lastly, sinus bradycardia signifies a slower than normal heart rate, which is the opposite of what is seen in ventricular tachycardia. Therefore,

8. What should be done if a patient loses consciousness due to ventricular tachycardia?

- A. Immediate administration of oral medications
- B. Defibrillation and CPR**
- C. Monitoring vital signs only
- D. Wait for natural recovery

When a patient loses consciousness due to ventricular tachycardia, prompt intervention is critical. The recommended approach is to perform defibrillation and CPR. Ventricular tachycardia can lead to reduced cardiac output, often resulting in diminished perfusion and loss of consciousness due to inadequate blood flow to vital organs, particularly the brain. Defibrillation is essential because it aims to restore a normal heart rhythm. In cases of ventricular tachycardia, especially if the patient is unconscious and showing no signs of circulation, immediate defibrillation can improve the chances for survival and recovery. CPR is crucial while awaiting defibrillation, as it helps maintain some blood circulation until normal heart rhythm is restored. Other options would not provide the immediate help necessary in this acute situation. For example, administering oral medications would be ineffective and unsafe for an unconscious patient, while simply monitoring vital signs would not address the underlying life-threatening arrhythmia. Waiting for natural recovery poses a significant risk, as the patient's condition may deteriorate, potentially leading to cardiac arrest without timely intervention. Thus, the appropriate response in this scenario emphasizes the urgency of defibrillation and CPR.

9. When should ischemia-modified albumin levels return to normal after correction of ischemia?

- A. 1-2 hours**
- B. 6-12 hours**
- C. 24 hours**
- D. 48 hours**

Ischemia-modified albumin (IMA) levels are an important marker used to assess the presence of myocardial ischemia. After ischemia is corrected, IMA levels tend to normalize as the metabolic processes in the heart and particularly in the liver, where albumin is synthesized, return to baseline. Research indicates that IMA levels typically normalize within a timeframe of approximately 6 to 12 hours following the resolution of ischemia. This timing is significant as it reflects the underlying biological processes associated with ischemia and its correction. Initially, when ischemia occurs, structural changes happen in the albumin molecule, leading to elevated IMA levels. Once blood flow is restored, the body begins to clear these modified molecules, and new, unmodified albumin is produced, leading to a decrease in IMA. Hence, the 6-12 hour timeframe is clinically relevant, allowing healthcare providers to assess the status of myocardial ischemia accurately.

10. Which heart valve is most commonly affected by rheumatic fever?

- A. Aortic valve**
- B. Tricuspid valve**
- C. Mitral valve**
- D. Pulmonic valve**

Rheumatic fever is a serious inflammatory condition that can arise as a complication of untreated streptococcal throat infection. One of its most significant long-term effects is valvular heart disease, particularly affecting the mitral valve. The condition leads to an immune response that may damage the heart valves. Among the heart valves, the mitral valve is the one most commonly affected by rheumatic fever, leading to disorders such as mitral stenosis or mitral regurgitation. The mitral valve's anatomical position and its role in the blood flow between the left atrium and left ventricle make it more susceptible to the immunological damage caused by rheumatic fever. The inflammation and scarring that occur can alter the normal structure and function of the valve, resulting in significant clinical consequences for the patient. Other valves, such as the aortic, tricuspid, and pulmonic valves, can also be affected by rheumatic fever, but they are far less commonly involved compared to the mitral valve. This significantly increases the likelihood of mitral valve pathology in patients with a history of rheumatic fever, solidifying its status as the most commonly affected valve in this disease process.

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!