

HESI Cardiology Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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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 common test is used to evaluate a patient's exercise tolerance and cardiac function?**
 - A. Echocardiogram**
 - B. Exercise stress testing**
 - C. Cardiac MRI**
 - D. Holter monitoring**

- 2. How does smoking impact cardiovascular health?**
 - A. It decreases blood pressure**
 - B. It increases the risk of atherosclerosis and heart disease**
 - C. It improves circulation**
 - D. It enhances heart rate recovery**

- 3. What is a common complication of myocardial infarction?**
 - A. Stroke**
 - B. Heart failure or arrhythmias**
 - C. Hypertension**
 - D. Diabetes**

- 4. What is the primary purpose of the pacemaker wires that can be inserted during a coronary artery bypass graft surgery?**
 - A. These pacing wires can be attached to a temporary pacemaker to shock the heart if it starts beating too fast.**
 - B. This type of pacemaker will automatically defibrillate the heart if the heart forgets to beat.**
 - C. The pacemaker will maintain a constant cardiac rhythm.**
 - D. In case of too slow of a heart rate, the epicardial leads are attached to a pacemaker to maintain a normal rate.**

- 5. When assessing a client's ECG reading, how will the nurse interpret equal atrial and ventricular heart rates with a PR interval of 0.14 seconds?**
 - A. Normal sinus rhythm**
 - B. Sinus tachycardia**
 - C. Sinus bradycardia**
 - D. Sinus arrhythmia**

6. What is a potential sign of myocardial infarction detected during an ECG?

- A. Normal P wave pattern**
- B. Elevated ST segment**
- C. Decreased heart rate**
- D. Flat QRS complex**

7. What is the primary function of the coronary arteries?

- A. To supply blood to the lungs**
- B. To supply oxygenated blood to the heart muscle**
- C. To drain blood from the heart**
- D. To facilitate electrical conduction**

8. What conclusion can the nurse draw from identifying premature ventricular complexes (PVCs) on a cardiac monitor?

- A. Atrial fibrillation**
- B. Cardiac irritability**
- C. Impending heart block**
- D. Ventricular tachycardia**

9. What is a common symptom of myocardial infarction?

- A. Shortness of breath**
- B. Chest pain or discomfort**
- C. Palpitations**
- D. Dizziness**

10. Which of the following is the most common arrhythmia?

- A. Ventricular tachycardia**
- B. Atrial fibrillation**
- C. Supraventricular tachycardia**
- D. Bradycardia**

Answers

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

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Explanations

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1. Which common test is used to evaluate a patient's exercise tolerance and cardiac function?

- A. Echocardiogram
- B. Exercise stress testing**
- C. Cardiac MRI
- D. Holter monitoring

Exercise stress testing is the common test used to evaluate a patient's exercise tolerance and cardiac function. This test involves monitoring the heart's activity while the patient engages in physical exercise, typically on a treadmill or stationary bike. It assesses how well the heart responds to stress, helping to identify conditions such as coronary artery disease, exercise-induced arrhythmias, and overall cardiac health. During the test, several parameters are monitored, including heart rate, blood pressure, and ECG changes, which provide valuable information about the heart's performance under increased workload. The results can indicate whether the heart is receiving adequate blood flow during exertion, which is crucial for determining exercise capacity and fitness levels. The other tests listed serve different purposes: an echocardiogram visualizes heart structures and assesses function but does not involve exercise; a cardiac MRI provides detailed images of the heart but is not specifically designed to evaluate exercise tolerance; and Holter monitoring tracks heart rhythms over an extended period, typically during daily activities, rather than during a controlled exercise situation.

2. How does smoking impact cardiovascular health?

- A. It decreases blood pressure
- B. It increases the risk of atherosclerosis and heart disease**
- C. It improves circulation
- D. It enhances heart rate recovery

Smoking significantly impacts cardiovascular health by increasing the risk of atherosclerosis and heart disease. The chemicals found in tobacco smoke can cause damage to the blood vessels, leading to a buildup of plaque in the arteries, which is a key factor in atherosclerosis. When the arteries become narrowed due to plaque accumulation, it restricts blood flow and raises the chances of heart attacks and strokes. In addition to promoting atherosclerosis, smoking contributes to various cardiovascular diseases by increasing inflammation, altering lipid profiles, elevating heart rate, and increasing blood pressure. Collectively, these factors culminate in a higher incidence of coronary artery disease and other heart-related issues. The other options incorrectly portray the effects of smoking on cardiovascular health; for instance, smoking does not decrease blood pressure, improve circulation, or enhance heart rate recovery. In fact, it tends to do the opposite, exacerbating cardiovascular problems.

3. What is a common complication of myocardial infarction?

- A. Stroke
- B. Heart failure or arrhythmias**
- C. Hypertension
- D. Diabetes

The common complication of myocardial infarction that is most directly associated with the event is heart failure or arrhythmias. Following a myocardial infarction, which is the death of heart muscle tissue due to a lack of blood supply, the heart's ability to pump effectively can be impaired. This impairment can lead to heart failure, where the heart cannot maintain adequate blood flow to meet the body's demands. Additionally, the damage to the heart muscle can disrupt the electrical pathways, resulting in arrhythmias, which are irregular heartbeats. These complications arise from the structural and functional changes that occur in the myocardium after an ischemic episode. In essence, the weakening of the heart muscle and alteration of the conduction system are direct results of the myocardial infarction, making heart failure and arrhythmias prevalent complications in the post-infarction setting. Other conditions listed, while they might be related to or influenced by cardiovascular health, do not typically arise as immediate complications of a myocardial infarction.

4. What is the primary purpose of the pacemaker wires that can be inserted during a coronary artery bypass graft surgery?

- A. These pacing wires can be attached to a temporary pacemaker to shock the heart if it starts beating too fast.
- B. This type of pacemaker will automatically defibrillate the heart if the heart forgets to beat.
- C. The pacemaker will maintain a constant cardiac rhythm.
- D. In case of too slow of a heart rate, the epicardial leads are attached to a pacemaker to maintain a normal rate.**

The primary purpose of the pacemaker wires inserted during coronary artery bypass graft surgery is to provide temporary pacing of the heart if it develops bradycardia or a slow heart rate. These epicardial leads, which are attached to the heart's surface, can be connected to a temporary pacemaker to stimulate the heart to beat at an appropriate rate if the natural pacemaker function is compromised during or after the surgery. In the immediate postoperative period, it is not uncommon for patients to experience fluctuations in heart rate as the heart adjusts to the surgical changes. If the heart rate falls below normal, the pacing wires allow for external electrical stimulation to establish a healthy rhythm until the heart resumes normal function. This application is crucial as sustained bradycardia can lead to inadequate cardiac output and pose significant risks to the patient. While this highlights the function of epicardial leads, other options do not accurately describe their role. For example, pacemaker wires do not deliver shocks for tachycardia as indicated in one of the alternatives. Additionally, they do not provide continuous rhythms like a fully implanted pacemaker because they are temporarily used in response to specific needs. Lastly, while the notion of automatic defibrillation exists elsewhere in cardiac care, it does not apply

5. When assessing a client's ECG reading, how will the nurse interpret equal atrial and ventricular heart rates with a PR interval of 0.14 seconds?

- A. Normal sinus rhythm**
- B. Sinus tachycardia**
- C. Sinus bradycardia**
- D. Sinus arrhythmia**

The interpretation of equal atrial and ventricular heart rates along with a PR interval of 0.14 seconds indicates a normal conduction pathway through the heart. In a normal sinus rhythm, the electrical impulses originate from the sinoatrial (SA) node, which leads to synchronous atrial and ventricular contractions. The PR interval, which measures the time taken for electrical conduction from the atria to the ventricles, is within the normal range of 0.12 to 0.20 seconds. A PR interval of 0.14 seconds indicates that there is proper conduction without any delay, which is characteristic of a normal sinus rhythm. This absence of either bradycardia (slow heart rate) or tachycardia (fast heart rate) further supports the conclusion that the rhythm is normal. In contrast, sinus tachycardia and sinus bradycardia are characterized by elevated and decreased heart rates respectively, which would not reflect equal atrial and ventricular heart rates. Sinus arrhythmia is defined by an irregular rhythm that often relates to variations in respiratory cycles, which would also not present equal rates. Therefore, the data provided aligns perfectly with normal sinus rhythm.

6. What is a potential sign of myocardial infarction detected during an ECG?

- A. Normal P wave pattern**
- B. Elevated ST segment**
- C. Decreased heart rate**
- D. Flat QRS complex**

A potential sign of myocardial infarction detectable during an ECG is an elevated ST segment. This phenomenon, known as ST-segment elevation, indicates that there is an acute injury to the heart muscle, which occurs when there is a blockage in one of the coronary arteries. This blockage restricts blood flow, resulting in ischemia and subsequent damage to cardiac tissue. The elevation reflects the impact of this injury on the electrical activity of the heart, specifically during the phase of depolarization. In contrast, a normal P wave pattern would indicate that the atria are depolarizing normally, while a decreased heart rate does not specifically correlate with myocardial infarction and can be influenced by various factors. A flat QRS complex could suggest an abnormality in ventricular conduction, but it is not a definitive indicator of myocardial infarction like an elevated ST segment is. Thus, ST-segment elevation serves as a clear and critical marker for diagnosing acute myocardial infarction on an ECG.

7. What is the primary function of the coronary arteries?

- A. To supply blood to the lungs
- B. To supply oxygenated blood to the heart muscle**
- C. To drain blood from the heart
- D. To facilitate electrical conduction

The primary function of the coronary arteries is to supply oxygenated blood to the heart muscle. The heart is a vital organ that requires a constant supply of oxygen-rich blood to function effectively. The coronary arteries branch off from the aorta and encircle the heart, distributing oxygen and nutrients to the myocardium, which is the muscular tissue of the heart. Without an adequate blood supply provided by the coronary arteries, the heart muscle would not receive the oxygen it needs for the contraction process, leading to conditions such as angina or myocardial infarction (heart attack). This essential role highlights the importance of coronary circulation in maintaining the heart's health and performance, as it ensures the muscle can work efficiently to pump blood throughout the body. The other functions mentioned, such as supplying blood to the lungs or facilitating electrical conduction, do not pertain to the coronary arteries. Instead, the pulmonary arteries are responsible for carrying deoxygenated blood to the lungs for oxygenation, while the heart's electrical conduction system, which includes structures like the sinoatrial node and atrioventricular node, regulates the heart's rhythm but is not related to the blood supply.

8. What conclusion can the nurse draw from identifying premature ventricular complexes (PVCs) on a cardiac monitor?

- A. Atrial fibrillation
- B. Cardiac irritability**
- C. Impending heart block
- D. Ventricular tachycardia

Identifying premature ventricular complexes (PVCs) on a cardiac monitor indicates that there is an instance of ectopic impulses originating from the ventricles, which can suggest a state of cardiac irritability. This irritability may stem from various factors, including electrolyte imbalances, increased sympathetic tone, ischemia, or structural heart changes. PVCs are often considered a sign that the heart's normal rhythm is being disrupted, reflecting a tendency for abnormal electrical activity in the ventricular myocardium. While PVCs can occur in a healthy heart, their frequent occurrence may be alarming and prompt further investigation to ascertain underlying issues, hence cementing the association with cardiac irritability. Recognizing this connection allows healthcare professionals to monitor patient care closely and ensure that any potential complications are addressed promptly. Other options, like atrial fibrillation, impending heart block, and ventricular tachycardia, represent distinct cardiac conditions that would present differently on a cardiac monitor and are not directly indicated by the presence of PVCs alone. Each of those conditions has specific criteria and implications that do not align with the immediate conclusion suggested by observing PVCs.

9. What is a common symptom of myocardial infarction?

- A. Shortness of breath
- B. Chest pain or discomfort**
- C. Palpitations
- D. Dizziness

Chest pain or discomfort is a hallmark symptom of myocardial infarction (MI), often described as a feeling of pressure, squeezing, or fullness in the chest. This symptom is typically caused by reduced blood flow to the heart muscle due to a blockage in the coronary arteries, which can lead to damage or death of heart tissue if not promptly addressed. While other symptoms like shortness of breath, palpitations, and dizziness can also occur during an MI, they are not as characteristic or definitive as chest pain. In many cases, individuals experiencing an MI may not present with severe or typical chest pain. Instead, they might report a more unusual sensation, which can sometimes lead to misdiagnosis. However, chest pain remains the classic symptom that is most commonly associated with myocardial infarction, making it a critical sign for early identification and intervention. Recognizing this symptom can prompt individuals to seek emergency medical assistance, potentially saving their lives.

10. Which of the following is the most common arrhythmia?

- A. Ventricular tachycardia
- B. Atrial fibrillation**
- C. Supraventricular tachycardia
- D. Bradycardia

Atrial fibrillation is the most common arrhythmia seen in clinical practice. This condition is characterized by an irregular and often rapid heartbeat that can lead to various complications, including stroke and heart failure. It typically arises from chaotic electrical signals in the atria, which results in inadequate blood flow and can exacerbate other cardiac conditions. Atrial fibrillation is prevalent, especially among older adults and individuals with pre-existing heart disease, hypertension, or other risk factors. Its widespread occurrence is further highlighted by its recognition in numerous population studies that find a significant percentage of patients undergoing cardiac evaluations to have this arrhythmia. In contrast, other arrhythmias such as ventricular tachycardia or supraventricular tachycardia, while clinically significant, are not as commonly diagnosed in the general population. Bradycardia, defined as an unusually slow heart rate, is less prevalent and is typically identified in specific scenarios such as in athletes or in the presence of certain medical conditions, making atrial fibrillation the most common arrhythmia encountered.

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://hesicardiology.examzify.com>

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

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