

FIELD INTERNSHIP STUDENT DATA ACQUISITION PROJECT (FISDAP) EMT CARDIOLOGY PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED 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. 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 are the signs of a possible cardiac event in women that may differ from men?**
 - A. Chronic cough and fever
 - B. Persistent sweating and arm pain
 - C. Unusual fatigue, shortness of breath, and indigestion
 - D. Severe chest pain and confusion
- 2. What is a common complication of myocardial infarction?**
 - A. Arrhythmias
 - B. Heart failure
 - C. Cardiac tamponade
 - D. Myocardial rupture
- 3. What should be your immediate action if a patient who was successfully shocked back into a normal rhythm becomes cyanotic and pulseless during transport?**
 - A. Start CPR, and request additional EMS support
 - B. Monitor vital signs and wait for guidance
 - C. Administer oxygen and reassess
 - D. Intubate the patient immediately
- 4. Which symptom is most associated with a patient in cardiogenic shock?**
 - A. Increased urine output
 - B. Warm, dry skin
 - C. Rapid, weak pulse
 - D. Normal blood pressure
- 5. What condition primarily results from the blockage of coronary arteries?**
 - A. Hypertrophic cardiomyopathy
 - B. Coronary artery disease
 - C. Aortic stenosis
 - D. Aneurysm

6. A 36-year-old female with pale, cool, and clammy skin and very low blood pressure is likely experiencing which condition?
- A. Cardiogenic Shock
 - B. Septic Shock
 - C. Hypovolemic Shock
 - D. Anaphylactic Shock
7. What is the most common presenting symptom of a myocardial infarction?
- A. Shortness of breath
 - B. Nausea
 - C. Chest pain
 - D. Dizziness
8. What is a primary goal in the management of heart failure?
- A. Increase blood pressure
 - B. Decrease heart rate
 - C. Improve cardiac output
 - D. Promote fluid retention
9. At what rate should single rescuer CPR be performed for a 17-year-old female?
- A. 90 compressions/minute
 - B. 100 compressions/minute
 - C. 120 compressions/minute
 - D. 140 compressions/minute
10. Which physiological process is primarily responsible for the heart's ability to contract?
- A. Increased blood volume
 - B. The influx of calcium ions during depolarization of cardiac muscle cells
 - C. Decreased oxygen levels in the blood
 - D. Stimulation from the vagus nerve

Answers

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

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Explanations

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1. What are the signs of a possible cardiac event in women that may differ from men?

- A. Chronic cough and fever
- B. Persistent sweating and arm pain
- C. Unusual fatigue, shortness of breath, and indigestion**
- D. Severe chest pain and confusion

Unusual fatigue, shortness of breath, and indigestion are recognized signs of possible cardiac events in women that may differ from the more commonly known symptoms seen in men. Women often experience atypical symptoms when having a heart attack, which can lead to delays in seeking necessary medical care. Unusual fatigue, particularly if it is new and persistent, can signal the onset of heart problems. Additionally, shortness of breath can indicate that the heart is not functioning properly, and indigestion or gastrointestinal discomfort can often be mistaken for less serious issues. These symptoms highlight the importance of understanding gender differences in cardiac presentations, as being aware of them can help lead to more timely diagnosis and treatment for women experiencing cardiovascular events. In contrast, more classic symptoms such as severe chest pain are often more prominently reported in men, leading to a potential oversight of women's presentations if they conform to traditional expectations of heart attack symptoms.

2. What is a common complication of myocardial infarction?

- A. Arrhythmias
- B. Heart failure**
- C. Cardiac tamponade
- D. Myocardial rupture

Arrhythmias are a well-documented complication of myocardial infarction. During a myocardial infarction, part of the heart muscle is deprived of oxygen and nutrients due to a blockage in the coronary arteries. This lack of blood flow can lead to ischemia, which alters the electrical conduction pathways in the heart. As a result, arrhythmias, or irregular heartbeats, can occur, sometimes leading to life-threatening conditions such as ventricular fibrillation or tachycardia. While heart failure is also a common complication, especially as the myocardial damage affects the heart's ability to pump blood effectively over time, the immediate and acute complications that physicians and emergency responders monitor closely following an infarction often focus on arrhythmias. Both conditions can stem from the same underlying issue of compromised heart function, but arrhythmias may present acutely and require immediate intervention, making them a critical concern following a myocardial infarction. Cardiac tamponade and myocardial rupture are less common and are considered more serious events that might follow significant myocardial injury or pericardial effusion but do not typically represent the primary complications one would observe directly after a myocardial infarction.

3. What should be your immediate action if a patient who was successfully shocked back into a normal rhythm becomes cyanotic and pulseless during transport?

A. Start CPR, and request additional EMS support

B. Monitor vital signs and wait for guidance

C. Administer oxygen and reassess

D. Intubate the patient immediately

Starting CPR and requesting additional EMS support is the appropriate immediate action in this scenario because the patient has become cyanotic and pulseless, indicating a life-threatening condition that requires urgent intervention. Cardiopulmonary resuscitation (CPR) is critical in helping to circulate blood and oxygen to vital organs, which is essential when a patient is in cardiac arrest. In situations like this, the priority is to restore circulation and provide oxygenation as quickly as possible. By initiating CPR, you are performing the most effective intervention available to improve the chances of survival. This action is also paired with the request for additional EMS support, which is prudent to ensure that more advanced care can be provided promptly, such as medications or advanced airway management. Other actions, such as monitoring vital signs or administering oxygen, are important but do not have the same immediacy in a state of pulselessness. Waiting for guidance without taking action is not suitable, as every second counts in a cardiac emergency. Intubating the patient, although vital in some contexts, is not the first step when CPR is needed; it's crucial only after ensuring that effective circulation efforts are initiated. Therefore, the immediate focus must be on CPR and obtaining additional support to improve the patient's condition

4. Which symptom is most associated with a patient in cardiogenic shock?

A. Increased urine output

B. Warm, dry skin

C. Rapid, weak pulse

D. Normal blood pressure

In cardiogenic shock, the heart's ability to pump blood is severely compromised, leading to inadequate blood flow to the body's organs and tissues. This condition often results in a rapid and weak pulse, as the heart struggles to maintain sufficient cardiac output amidst failing function. The heart's inability to maintain normal perfusion manifests in the heart rate increasing as a compensatory mechanism, leading to tachycardia; however, the pulse may be weak due to the reduced stroke volume. In contrast, increased urine output typically indicates effective kidney perfusion and fluid status, which is not present in cardiogenic shock. Warm, dry skin is associated with conditions like septic shock, where blood vessels dilate, misleadingly allowing warmth to the periphery, rather than the cool, clammy skin that often accompanies cardiogenic shock due to peripheral vasoconstriction. Normal blood pressure is not common in cardiogenic shock; instead, patients usually present with hypotension due to the compromised cardiac function. Therefore, the symptom of a rapid and weak pulse is most closely linked to the physiological changes that occur in a patient experiencing cardiogenic shock.

5. What condition primarily results from the blockage of coronary arteries?

- A. Hypertrophic cardiomyopathy
- B. Coronary artery disease**
- C. Aortic stenosis
- D. Aneurysm

Coronary artery disease is primarily the condition that results from the blockage of coronary arteries. This disease typically occurs when the coronary arteries, which supply blood to the heart muscle, become narrowed or obstructed due to a buildup of atherosclerotic plaques. This blockage can restrict blood flow, leading to ischemia or lack of oxygen in the heart muscle, which can manifest as chest pain (angina) or even result in a heart attack if the blockage is severe enough. In contrast, hypertrophic cardiomyopathy relates to the thickening of the heart muscle itself, which is often genetic and not directly caused by arterial blockage. Aortic stenosis is a narrowing of the aortic valve that can affect blood flow from the heart but is not a direct consequence of coronary artery obstruction. An aneurysm, particularly of the aorta, is a bulging of the arterial wall and can be due to various factors, including hypertension or connective tissue disorders, rather than the blockages seen in coronary artery disease.

6. A 36-year-old female with pale, cool, and clammy skin and very low blood pressure is likely experiencing which condition?

- A. Cardiogenic Shock**
- B. Septic Shock
- C. Hypovolemic Shock
- D. Anaphylactic Shock

The symptoms described—pale, cool, and clammy skin along with very low blood pressure—are indicative of cardiogenic shock. This condition occurs when the heart is unable to pump effectively, leading to inadequate circulation and perfusion to the body. In cardiogenic shock, the failure of the heart to maintain an adequate cardiac output results in a state of shock, which is characterized by signs of poor perfusion such as cool and clammy skin. The low blood pressure indicates a significant reduction in the heart's ability to generate sufficient pressure to circulate blood, which is a hallmark of cardiogenic shock. Patients may also present with signs of heart failure, such as jugular venous distension or pulmonary edema, but the key indicators in this scenario are the skin changes and hypotension reflecting a compromised cardiovascular system. Understanding the underlying mechanisms of cardiogenic shock is critical. It can result from various cardiac events, such as a myocardial infarction or severe arrhythmias, leading to a decrease in pump function. In contrast, other types of shock like septic, hypovolemic, or anaphylactic shock present with different underlying causes and symptoms, such as signs of infection, fluid loss, or allergic reactions, respectively, which are not evident in this

7. What is the most common presenting symptom of a myocardial infarction?

- A. Shortness of breath
- B. Nausea
- C. Chest pain**
- D. Dizziness

Chest pain is recognized as the most common presenting symptom of a myocardial infarction (heart attack). This symptom typically manifests as a feeling of pressure, squeezing, fullness, or pain in the center or left side of the chest. Patients often describe it as intense and may feel as though something heavy is placed on their chest. Understanding the sensation of chest pain is critical for early recognition of a myocardial infarction, as it signifies that the heart is not receiving adequate blood flow, often due to blockage in the coronary arteries. The timely identification of this symptom can lead to prompt medical intervention, significantly improving patient outcomes. While shortness of breath, nausea, and dizziness can accompany a myocardial infarction, they are not as prevalent as chest pain. Many patients experiencing a heart attack report chest pain as their primary symptom, which can assist healthcare providers in making quick and accurate assessments when a patient presents with acute cardiac symptoms.

8. What is a primary goal in the management of heart failure?

- A. Increase blood pressure
- B. Decrease heart rate
- C. Improve cardiac output**
- D. Promote fluid retention

Improving cardiac output is a primary goal in the management of heart failure because it directly addresses the fundamental issue in heart failure, which is the heart's inability to pump sufficient blood to meet the body's needs. By increasing cardiac output, clinicians aim to enhance the delivery of oxygen and nutrients to tissues, thereby improving overall organ function and the patient's quality of life. In heart failure, the heart may struggle to contract effectively or may become stiff and unable to fill adequately. Management strategies often focus on addressing these issues to optimize cardiac function. This can include medications that help the heart pump more effectively, such as inotropes, or agents that reduce fluid overload, allowing the heart to work more efficiently. The other options involve different processes that are not the primary focus of heart failure management. For example, increasing blood pressure can be useful in certain clinical scenarios, but it isn't a goal in all cases. Decreasing heart rate might be a consideration in some patients, often to reduce workload on the heart, but it does not address the fundamental purpose of improving cardiac function. Promoting fluid retention is typically counterproductive in heart failure, where fluid overload is a common complication. Therefore, the emphatic focus remains on improving cardiac output to ensure adequate tissue perfusion and

9. At what rate should single rescuer CPR be performed for a 17-year-old female?

- A. 90 compressions/minute
- B. 100 compressions/minute
- C. 120 compressions/minute**
- D. 140 compressions/minute

Single rescuer CPR for a 17-year-old female should be performed at a rate of 120 compressions per minute. This guideline aligns with the current recommendations from organizations like the American Heart Association, which emphasize the importance of high-quality chest compressions in cardiac arrest situations. Performing compressions at this rate ensures that blood is effectively circulated to vital organs, especially the brain and heart, during cardiac arrest. This range not only maximizes perfusion but also aligns with the optimal rhythm needed to allow adequate diastolic filling of the heart, thus improving outcomes for the patient. The recommendations for compression rates are particularly critical for adolescents and adults, given that their physiological needs are similar. Adhering to this rate is crucial for sustaining the blood flow until advanced care can be provided. Thus, understanding the importance of the compression rate is vital for anyone involved in emergency response and first aid scenarios.

10. Which physiological process is primarily responsible for the heart's ability to contract?

- A. Increased blood volume
- B. The influx of calcium ions during depolarization of cardiac muscle cells**
- C. Decreased oxygen levels in the blood
- D. Stimulation from the vagus nerve

The ability of the heart to contract is primarily dependent on the influx of calcium ions during the depolarization of cardiac muscle cells. When the cardiac cells receive an electrical impulse during depolarization, calcium ions flood into the cells through ion channels. This influx of calcium initiates the process of muscle contraction through a mechanism known as excitation-contraction coupling. The calcium ions bind to troponin, a regulatory protein that allows interaction between actin and myosin filaments, leading to contraction of the heart muscle. This process is crucial for the heart's pumping action, allowing it to effectively circulate blood throughout the body. The strength and rhythm of the heart's contractions are directly influenced by calcium concentrations, making this physiological process essential for normal cardiac function. Other factors, such as blood volume, oxygen levels, and nervous stimulation, play roles in overall heart function and regulation but do not directly initiate the contraction mechanism like calcium ion influx does.

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://fisdapemtcadiology.examzify.com>

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

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