

Therapeutics - Cardiovascular System Practice Test (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. During ventricular relaxation, which valves close?**
 - A. Pulmonary and Aortic valves**
 - B. AV valves**
 - C. Tricuspid valve and Mitral valve**
 - D. Aortic valve only**

- 2. The heart has three layers of tissue.**
 - A. Epicardium, Endocardium, Myocardium**
 - B. Endocardium, Myocardium, Pericardium**
 - C. Endocardium, Pericardium, Myocardium**
 - D. Pericardium, Epicardium, Endocardium**

- 3. Which statement best describes congestive heart failure?**
 - A. The heart pumps blood less efficiently, due to poor pumping or filling.**
 - B. It is an acute infection of the heart valves.**
 - C. It is caused only by high blood pressure.**
 - D. It refers to a temporary spike in heart rate during exercise.**

- 4. Deep vein thrombosis is the formation of a clot in which location?**
 - A. The superficial veins of the leg**
 - B. The deep veins of an extremity**
 - C. The heart chambers**
 - D. The capillaries in the lungs**

- 5. Endocardium is the smooth inner lining.**
 - A. Outer surface of the heart**
 - B. Thick middle layer made of muscle**
 - C. Double membrane sac outside the heart**
 - D. Smooth inner lining**

- 6. Which of the following can EKG results help diagnose?**
 - A. Anemia**
 - B. Cerebral stroke**
 - C. Aortic aneurysm**
 - D. Heart attacks and arrhythmias**

- 7. Which of the following is NOT part of the heart?**
- A. Lungs**
 - B. Atria**
 - C. Ventricles**
 - D. Pericardium**
- 8. Phlebitis refers to inflammation of which part of the circulatory system?**
- A. Arteries**
 - B. Veins**
 - C. Capillaries**
 - D. Lymphatic vessels**
- 9. Which side of the heart contains blood high in oxygen and low in carbon dioxide?**
- A. Right side of the heart**
 - B. Left side of the heart**
 - C. The pulmonary circulation**
 - D. The systemic circulation**
- 10. Which of the following represents treatments for anemia?**
- A. Radiation therapy**
 - B. Surgery to remove spleen**
 - C. Antibiotics only**
 - D. Diet changes, supplements, meds, infusion, or stem cell transplant**

Answers

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

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Explanations

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1. During ventricular relaxation, which valves close?

- A. Pulmonary and Aortic valves**
- B. AV valves
- C. Tricuspid valve and Mitral valve
- D. Aortic valve only

During ventricular relaxation (diastole), the ventricles' pressure falls below the pressure in the aorta and pulmonary artery. This pressure difference makes the semilunar valves—the pulmonary valve and the aortic valve—snap shut to prevent blood from flowing back into the ventricles. The closing of these valves is what produces the second heart sound. In this phase, the atrioventricular valves (tricuspid and mitral) are open, allowing blood to flow from the atria into the ventricles, so they are not closed during ventricular relaxation.

2. The heart has three layers of tissue.

- A. Epicardium, Endocardium, Myocardium
- B. Endocardium, Myocardium, Pericardium**
- C. Endocardium, Pericardium, Myocardium
- D. Pericardium, Epicardium, Endocardium

Understanding how the heart is structured in layers helps answer this. The heart wall has three tissue layers from inside to outside: endocardium (the inner lining of the chambers and valves), the myocardium (the thick muscular layer that contracts), and the epicardium (the outer surface, which is the visceral layer of the serous pericardium). The pericardium itself is a surrounding sac that encases the heart, not a layer of the heart wall. This is why some answer keys phrase the outermost covering as the pericardium, which makes the trio endocardium, myocardium, and pericardium a reasonable way to describe the three concentric coverings around the heart in that context. However, the precise wall layers are endocardium, myocardium, and epicardium.

3. Which statement best describes congestive heart failure?

- A. The heart pumps blood less efficiently, due to poor pumping or filling.**
- B. It is an acute infection of the heart valves.
- C. It is caused only by high blood pressure.
- D. It refers to a temporary spike in heart rate during exercise.

Congestive heart failure occurs when the heart can't pump enough blood to meet the body's needs, either because it can't contract effectively (poor pumping) or because it can't fill properly (impaired filling). This reduces overall cardiac output and leads to fluid congestion in the lungs, abdomen, and extremities. The statement that best fits this idea is that the heart pumps blood less efficiently, due to poor pumping or filling. It captures both types of dysfunction that produce CHF: systolic failure (weak pumping) and diastolic failure (impaired filling). The other descriptions don't describe CHF: an acute infection of the heart valves is endocarditis, not heart failure. CHF isn't caused only by high blood pressure—hypertension is a common risk factor but not the sole cause. A temporary spike in heart rate during exercise is a normal physiological response, not congestive heart failure.

4. Deep vein thrombosis is the formation of a clot in which location?

- A. The superficial veins of the leg
- B. The deep veins of an extremity**
- C. The heart chambers
- D. The capillaries in the lungs

Deep vein thrombosis involves a clot forming in the deep venous system, most often in the legs. The deep veins, like the femoral, popliteal, tibial, and iliac veins, run within the muscles and are the usual site for DVT. This differs from clots that occur in superficial veins (which is a separate condition) or from clots in heart chambers or in the lungs themselves. A clot in the lungs would be a pulmonary embolism, typically arising from a DVT that has traveled from a deep vein to the pulmonary arteries, not from a site in the lungs themselves. So the defining location for DVT is the deep veins of an extremity.

5. Endocardium is the smooth inner lining.

- A. Outer surface of the heart
- B. Thick middle layer made of muscle
- C. Double membrane sac outside the heart
- D. Smooth inner lining**

Endocardium is the smooth inner lining of the heart's chambers and valves. It's a thin layer of endothelial cells that provides a slick surface to minimize friction as blood moves through the heart and helps protect the delicate structures inside. It remains continuous with the endothelium lining of all blood vessels. The outer surface of the heart is the epicardium (often referred to as the visceral layer of the pericardium), the thick muscular middle layer is the myocardium, and the double-membrane sac surrounding the heart is the pericardium. Because endocardium specifically describes the innermost lining, "smooth inner lining" is the correct description.

6. Which of the following can EKG results help diagnose?

- A. Anemia
- B. Cerebral stroke
- C. Aortic aneurysm
- D. Heart attacks and arrhythmias**

Electrocardiography primarily assesses the heart's electrical activity to detect problems with blood supply to the heart and heart rhythm. It records patterns that signal a heart attack (myocardial infarction) such as ST-segment changes and new Q waves, and it also reveals various arrhythmias like atrial fibrillation, tachycardias, or bradycardias. Anemia, cerebral stroke, and aortic aneurysm aren't diagnosed by the heart's electrical signals; confirming those conditions relies on blood tests or imaging studies (for anemia), neurological imaging and exams (for stroke), and vascular imaging (for aneurysm). So the ECG is best suited to diagnose heart attacks and arrhythmias.

7. Which of the following is NOT part of the heart?

- A. Lungs**
- B. Atria**
- C. Ventricles**
- D. Pericardium**

The heart is defined by its internal structures—the atria and ventricles—which are the chambers that receive and pump blood. The pericardium, on the other hand, is the protective membrane that surrounds the heart, forming a sac that anchors and lubricates it. Because the pericardium is not a chamber or tissue that constitutes the heart itself, it is not considered part of the heart. The lungs are also not part of the heart, though they are nearby and work closely with it, their role being in respiration rather than being cardiac components. In this context, the structure that is not part of the heart's actual composition is the pericardium, since it lies outside the heart's chambers but envelops them as a surrounding protective layer.

8. Phlebitis refers to inflammation of which part of the circulatory system?

- A. Arteries**
- B. Veins**
- C. Capillaries**
- D. Lymphatic vessels**

Phlebitis is inflammation of a vein. The prefix phleb- means vein, and -itis means inflammation, so the term specifically points to veins in the circulatory system. This is distinct from inflammation of arteries (arteritis), capillaries (capillitis), or lymphatic vessels (lymphangitis). Inflammation of veins often presents as redness, warmth, tenderness along the vein, and may be accompanied by swelling, especially if a clot forms (thrombophlebitis).

9. Which side of the heart contains blood high in oxygen and low in carbon dioxide?

- A. Right side of the heart**
- B. Left side of the heart**
- C. The pulmonary circulation**
- D. The systemic circulation**

Oxygenated blood returns from the lungs to the heart and stays on the left side. After gas exchange in the lungs, the blood is high in oxygen and low in carbon dioxide, and it travels through the pulmonary veins into the left atrium, then is pumped by the left ventricle into the systemic circulation. The right side, by contrast, handles blood that's been depleted of oxygen after circulating through the body, so it's lower in oxygen and higher in carbon dioxide as it moves to the lungs for reoxygenation. Therefore, the left side of the heart contains blood high in oxygen and low in carbon dioxide.

10. Which of the following represents treatments for anemia?

- A. Radiation therapy**
- B. Surgery to remove spleen**
- C. Antibiotics only**
- D. Diet changes, supplements, meds, infusion, or stem cell transplant**

Anemia is treated by addressing its underlying cause and restoring the red blood cell supply. The approach listed covers the main ways this is done: changing the diet to include more iron, vitamins, and nutrients; taking supplements or medications to correct deficiencies (like iron, vitamin B12, or folate); using medicines that stimulate red blood cell production when appropriate (for example, erythropoiesis-stimulating agents); infusing therapies to replace iron or even to transfuse blood when needed; and, in severe or inherited cases, stem cell transplant to restore bone marrow function. Radiation therapy isn't a general treatment for anemia; it's a cancer therapy and may be used for specific conditions but doesn't directly correct anemia. Removing the spleen can help certain anemias caused by splenic sequestration but isn't a broad, first-line treatment for anemia itself. Antibiotics alone don't address the underlying deficit in red blood cells. The option that lists diet changes, supplements, meds, infusions, or stem cell transplant reflects the standard, cause-specific strategies used to treat most forms of anemia.

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://therapeuticcardiosys.examzify.com>

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

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