

THERAPEUTICS – CARDIOVASCULAR SYSTEM PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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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. Bradycardia is defined as a resting heart rate at or below which value?**
 - A. 55 BPM or Lower
 - B. 65 BPM or Lower
 - C. 60 BPM or Lower
 - D. 75 BPM or Lower
- 2. What does the T Wave on an ECG represent?**
 - A. Atrial depolarization
 - B. Ventricular contraction
 - C. Recovery or relaxation of the ventricles
 - D. AV node delay
- 3. In which organ does oxygen exchange occur in the circulatory system?**
 - A. Lungs
 - B. Liver
 - C. Spleen
 - D. Kidneys
- 4. Which arterial pulse is located at the top of the foot?**
 - A. Carotid
 - B. Dorsalis pedis
 - C. Posterior tibial
 - D. Radial
- 5. Stable Angina is the most common type and usually lasts**
 - A. 5 minutes or less
 - B. More than 30 minutes
 - C. Several hours
 - D. A few days
- 6. According to this material, hypertension is defined as blood pressure greater than what value?**
 - A. 120/80 mmHg
 - B. 130/85 mmHg
 - C. 140/90 mmHg
 - D. 150/100 mmHg

- 7. Name the P2Y12 inhibitors and describe a key difference between clopidogrel, ticagrelor, and prasugrel.**
- A. Clopidogrel is a prodrug with variable activation; Ticagrelor is reversible; Prasugrel is more potent with higher bleeding risk
 - B. Clopidogrel is IV; Ticagrelor is a prodrug; Prasugrel is weaker
 - C. All are prodrugs
 - D. Ticagrelor is a prodrug; Clopidogrel reversible; Prasugrel weaker
- 8. Anemia is defined as**
- A. Excess red blood cells
 - B. A deficiency of red blood cells or a reduction in the amount of hemoglobin they contain
 - C. Low white blood cell count
 - D. Increased platelets
- 9. What is a recommended approach to managing hypertension in this material?**
- A. Healthy lifestyle changes, regular BP monitoring, and antihypertensive medications
 - B. Surgical repair of arteries
 - C. Antibiotics only
 - D. High-sodium diet and bed rest
- 10. Which statement best describes the heart?**
- A. It is a muscular, hollow organ weighing less than 1 pound
 - B. It is a solid organ weighing more than 5 pounds
 - C. It is a nerve tissue organ weighing about 1 pound
 - D. It is a rigid structure weighing 2 pounds

Answers

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

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Explanations

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1. Bradycardia is defined as a resting heart rate at or below which value?

- A. 55 BPM or Lower
- B. 65 BPM or Lower
- C. 60 BPM or Lower
- D. 75 BPM or Lower

Bradycardia means a heart rate that is slower than normal when at rest. For adults, the lower limit of normal is about 60 beats per minute. When the resting pulse is at or below that value, it's considered bradycardic. That's why the correct threshold is 60 BPM or lower: it includes all rates that fall at or below the normal cutoff. Values above 60 are not bradycardia, while anything at or below 60 captures slower-than-normal rates, such as 58 or 40, which can be bradycardic depending on symptoms and context. Some people with very low rates can be asymptomatic athletes or may have underlying conditions, so the exact clinical significance depends on the overall picture.

2. What does the T Wave on an ECG represent?

- A. Atrial depolarization
- B. Ventricular contraction
- C. Recovery or relaxation of the ventricles
- D. AV node delay

On an ECG, each wave reflects a phase of the heart's electrical cycle. The T wave specifically marks ventricular repolarization—the ventricles returning to their resting state after contracting. In other words, the T wave represents the recovery or relaxation of the ventricles in preparation for the next heartbeat. The AV node delay is seen earlier as part of the PR interval, and atrial depolarization is the P wave, not the T wave. So the T wave signals the ventricles finishing their electrical reset and relaxing.

3. In which organ does oxygen exchange occur in the circulatory system?

- A. Lungs
- B. Liver
- C. Spleen
- D. Kidneys

Gas exchange for oxygen happens in the lungs, specifically at the alveoli. In these tiny air sacs, oxygen from inhaled air diffuses across the thin alveolar-capillary membrane into the blood, while carbon dioxide diffuses from the blood into the alveolar air to be exhaled. This process occurs as part of the pulmonary circulation, with deoxygenated blood from the heart's right side reaching the lungs, picking up oxygen, and returning to the heart to be circulated to the rest of the body. The other organs listed—liver, spleen, and kidneys—have important roles in metabolism, immunity, and waste filtration, but they are not the sites where oxygen is exchanged between air and blood.

4. Which arterial pulse is located at the top of the foot?

- A. Carotid
- B. Dorsalis pedis**
- C. Posterior tibial
- D. Radial

Locating arterial pulses hinges on matching the pulse to a named artery based on its surface course. The pulse you feel on the top of the foot comes from the dorsalis pedis artery, a continuation of the anterior tibial artery as it crosses the ankle and travels along the dorsum of the foot toward the toes. It's typically palpated on the dorsum, near the midfoot and just lateral to the extensor hallucis longus tendon. This site is commonly used to assess peripheral circulation. If it's not palpable, the posterior tibial pulse behind the medial malleolus can be an alternative. The carotid pulse is in the neck, the radial pulse is at the wrist, and the posterior tibial pulse is behind the ankle, not on the top of the foot.

5. Stable Angina is the most common type and usually lasts

- A. 5 minutes or less**
- B. More than 30 minutes
- C. Several hours
- D. A few days

Stable angina episodes are brief and self-limited, reflecting transient, reversible ischemia from a fixed narrowing. Because these episodes are provoked by exertion or stress and relieved by rest or nitroglycerin, they typically last five minutes or less. If chest discomfort lasts longer than several minutes or occurs at rest, it suggests an unstable pattern or evolving acute coronary syndrome that needs urgent evaluation. This short, predictable duration helps distinguish stable angina from more dangerous conditions like unstable angina or myocardial infarction.

6. According to this material, hypertension is defined as blood pressure greater than what value?

- A. 120/80 mmHg
- B. 130/85 mmHg
- C. 140/90 mmHg**
- D. 150/100 mmHg

The main idea here is how hypertension is defined by a threshold. In this material, blood pressure is considered hypertensive when the systolic value is greater than 140 mmHg or the diastolic value is greater than 90 mmHg, based on measurements taken on separate occasions. In other words, 140/90 mmHg is the cutoff being tested. This means that readings consistently above those numbers indicate hypertension, while normal readings are around 120/80, and a reading like 130/85 sits below the defined threshold (though it may be seen as elevated under newer guidelines). A value such as 150/100 would meet the hypertension criterion, but the key point the question targets is the threshold of 140/90 mmHg. Remember, diagnosis relies on repeated measurements to confirm persistent elevation, not a single reading.

7. Name the P2Y12 inhibitors and describe a key difference between clopidogrel, ticagrelor, and prasugrel.

A. Clopidogrel is a prodrug with variable activation; Ticagrelor is reversible; Prasugrel is more potent with higher bleeding risk

B. Clopidogrel is IV; Ticagrelor is a prodrug; Prasugrel is weaker

C. All are prodrugs

D. Ticagrelor is a prodrug; Clopidogrel reversible; Prasugrel weaker

Focusing on how these drugs work helps you understand why the correct choice is best. P2Y12 inhibitors differ in activation, reversibility, and potency. Clopidogrel is a prodrug that must be metabolized by hepatic enzymes to become active; because activation depends on individual genetics (like CYP2C19 variants) and drug interactions, the antiplatelet effect can vary between people. Ticagrelor is not a prodrug and binds the P2Y12 receptor reversibly, giving a faster and more controllable offset of effect. Prasugrel is also a prodrug, but its activation is more efficient and consistent, leading to stronger platelet inhibition and a higher bleeding risk compared with clopidogrel. This combination of facts explains why the statement that clopidogrel is a prodrug with variable activation, ticagrelor is reversible, and prasugrel is more potent with higher bleeding risk is the best description. The other options clash with known properties (clopidogrel is oral, not IV; ticagrelor is not a prodrug and is reversible; prasugrel is not weaker).

8. Anemia is defined as

A. Excess red blood cells

B. A deficiency of red blood cells or a reduction in the amount of hemoglobin they contain

C. Low white blood cell count

D. Increased platelets

Anemia means the blood's ability to carry oxygen is reduced because there are too few red blood cells or the red blood cells contain not enough hemoglobin. Hemoglobin is the protein in red blood cells that binds oxygen in the lungs and delivers it to tissues throughout the body; when its amount is low or there aren't enough red blood cells, oxygen delivery is impaired, leading to symptoms like fatigue, pallor, and shortness of breath. The other options describe different blood abnormalities—too many red cells would be polycythemia, a low white blood cell count is leukopenia, and increased platelets is thrombocytosis—none of which define anemia.

9. What is a recommended approach to managing hypertension in this material?

A. Healthy lifestyle changes, regular BP monitoring, and antihypertensive medications

B. Surgical repair of arteries

C. Antibiotics only

D. High-sodium diet and bed rest

Managing hypertension effectively relies on a combination of healthy lifestyle changes, regular blood pressure monitoring, and antihypertensive medications. Lifestyle adjustments—like maintaining a healthy weight, engaging in regular aerobic exercise, following the DASH eating plan, limiting sodium, moderating alcohol, and quitting smoking—help lower BP and reduce overall cardiovascular risk. Regular BP monitoring is essential to track control, assess treatment response, and ensure adherence. Antihypertensive medications are added when lifestyle measures alone aren't enough to reach target blood pressure, with drug choices tailored to the individual's overall health and any other conditions. Surgical repair of arteries isn't a routine treatment for high blood pressure; it's reserved for specific vascular issues. Antibiotics address infections, not blood pressure. A high-sodium diet and bed rest would typically worsen hypertension rather than improve it.

10. Which statement best describes the heart?

A. It is a muscular, hollow organ weighing less than 1 pound

B. It is a solid organ weighing more than 5 pounds

C. It is a nerve tissue organ weighing about 1 pound

D. It is a rigid structure weighing 2 pounds

The heart is a muscular, hollow pumping organ. It's made of cardiac muscle and has chambers that fill with blood and eject it under pressure, so it functions as a pump rather than a solid block of tissue. In an average adult, it weighs about 250–350 grams, which is roughly a half to three-quarters of a pound—consistently less than a pound. It isn't a solid organ, it isn't nerve tissue, and it isn't rigid; its walls must be able to stretch and contract to move blood through the heart and to the rest of the body. That's why the description of a muscular, hollow organ weighing less than a pound best fits the heart.

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://therapeuticscardiosys.examzify.com>

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

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