

INVASIVE CARDIOLOGY 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. Which view is used to visualize the right coronary artery from proximal to mid segments?**
 - A. LAO view
 - B. RAO caudal view
 - C. LAO cranial view
 - D. Lt Lateral view

- 2. Which closure device uses absorbable thrombin glue to seal the arteriotomy and tissue track?**
 - A. Duett closure device
 - B. Mynx closure device
 - C. Angioseal closure device
 - D. Perclose closure device

- 3. What is the primary purpose of the LV pullback?**
 - A. To evaluate the aortic valve
 - B. To assess left ventricular ejection fraction
 - C. To measure coronary flow reserve
 - D. To image the pulmonary arteries

- 4. Which measure is recommended to reduce the incidence of contrast-induced renal failure in patients with renal insufficiency?**
 - A. Increasing oral fluids and administering saline
 - B. Decreasing fluid intake
 - C. Using higher-osmolar contrast
 - D. Avoiding hydration

- 5. What is the recommended rise/fall setting range on a power injector to reduce catheter whip?**
 - A. 0.1-0.3
 - B. 0.3-0.6
 - C. 0.6-0.9
 - D. 0.9-1.2

6. Which of the following is a contraindication to cardiac catheterization?

- A. Hypertension
- B. Obesity
- C. Age over 80
- D. Pregnancy

7. Xience stents elute which drug?

- A. Everolimus
- B. Sirolimus
- C. Paclitaxel
- D. Zotarolimus

8. A patient with LVAD develops sudden confusion, weakness, and trouble speaking. Which complication is most probable?

- A. Stroke
- B. RH failure
- C. Depression
- D. Device failure/death

9. Which of the following is an indication for using an Impella?

- A. Hemodynamically unstable patients
- B. Stable CAD without instability
- C. Normal LV function
- D. No LV dysfunction

10. Which description correctly identifies the layer that anchors the vessel to surrounding tissues?

- A. Tunica Adventitia
- B. Tunica Media
- C. Tunica Intima
- D. Endothelium

Answers

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

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Explanations

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1. Which view is used to visualize the right coronary artery from proximal to mid segments?

- A. LAO view**
- B. RAO caudal view
- C. LAO cranial view
- D. Lt Lateral view

Focusing the X-ray beam with the heart rotated into a left anterior oblique position brings the right coronary artery into a clean, elongated profile along the right atrioventricular groove. This alignment minimizes overlap with the right atrium and ventricle and reduces foreshortening, allowing a continuous view from the proximal segment through the mid portion. Slight adjustments in tilt (often a cranial or caudal tweak as needed) keep the segment in view and prevent distortion. Because of this, the left anterior oblique projection is the best choice for visualizing the RCA from proximal to mid segments. Other views can still show parts of the artery but often suffer from overlap or foreshortening that obscures the targeted portion.

2. Which closure device uses absorbable thrombin glue to seal the arteriotomy and tissue track?

- A. Duett closure device**
- B. Mynx closure device
- C. Angioseal closure device
- D. Perclose closure device

This question is about how closure devices achieve hemostasis after femoral artery access. The Duett closure device stands out because it delivers an absorbable thrombin-based glue into the arteriotomy and the tissue tract. The thrombin glue promotes rapid clot formation, sealing both the puncture in the artery wall and the track through the surrounding tissue, and then is absorbed over time. This mechanism provides chemical hemostasis without leaving a bulky implant in the artery. Other devices use different methods: one relies on an intra-arterial anchor plus an extravascular collagen plug, another uses a hydrogel that swells to seal the tract, and another uses a suture to close the arteriotomy. The distinguishing feature here is the absorbable thrombin glue sealing both the arteriotomy and tissue track, which is why this device is the correct option.

3. What is the primary purpose of the LV pullback?

- A. To evaluate the aortic valve**
- B. To assess left ventricular ejection fraction
- C. To measure coronary flow reserve
- D. To image the pulmonary arteries

The LV pullback is used to assess the pressure gradient across the aortic valve by moving a pressure catheter from the left ventricle back into the aorta during systole. As you pull back, you compare LV pressure with aortic pressure to see where a drop occurs. A significant gradient across the valve indicates valvular aortic stenosis and helps gauge its severity, which is the main purpose of this maneuver. This technique isn't about measuring LV ejection fraction, which relies on imaging or ventriculography; nor is it a method for assessing coronary flow reserve or imaging the pulmonary arteries.

4. Which measure is recommended to reduce the incidence of contrast-induced renal failure in patients with renal insufficiency?

A. Increasing oral fluids and administering saline

B. Decreasing fluid intake

C. Using higher-osmolar contrast

D. Avoiding hydration

Hydration around the time of contrast exposure reduces the risk of contrast-induced nephropathy in patients with renal impairment. Giving fluids, especially with IV isotonic saline, helps maintain renal perfusion, dilutes the contrast agent in the tubules, and minimizes medullary ischemia and tubular injury. This protective effect is why increasing oral fluids and administering saline is the recommended approach. Decreasing fluid intake or avoiding hydration would worsen kidney perfusion and increase CIN risk, and using higher-osmolar contrast raises nephrotoxicity risk rather than mitigate it.

5. What is the recommended rise/fall setting range on a power injector to reduce catheter whip?

A. 0.1-0.3

B. 0.3-0.6

C. 0.6-0.9

D. 0.9-1.2

Controlling how quickly the injector ramps the flow up and down smooths the contrast jet and reduces abrupt pressure transients at the catheter tip. A moderate rise/fall setting provides a gradual, steady increase to the target rate and a gentle return to zero, which minimizes the forces that can cause the catheter to whip inside tortuous vessels or with small catheters. If the ramp is too slow, timing of the contrast bolus can be affected and image acquisition may be suboptimal. If the ramp is too rapid, the sudden jet can generate larger transient forces, increasing catheter movement. The middle, moderate range offers a balanced approach: it reduces catheter whip while preserving timely, diagnostic contrast delivery.

6. Which of the following is a contraindication to cardiac catheterization?

A. Hypertension

B. Obesity

C. Age over 80

D. Pregnancy

The main idea is that cardiac catheterization uses ionizing radiation and iodinated contrast, which carry risks to a developing fetus. Exposure to radiation during pregnancy can harm fetal tissues and organs, and contrast administration adds potential fetal and maternal risks. Because of these fetal risks, pregnancy is considered an absolute contraindication to cardiac catheterization. Hypertension, obesity, and age over 80, while they raise procedural risk and may complicate access or imaging, do not by themselves prevent the procedure when there is a strong clinical indication. They require careful planning and optimization, but they are not absolute exclusions.

7. Xience stents elute which drug?

A. Everolimus

B. Sirolimus

C. Paclitaxel

D. Zotarolimus

Xience stents are everolimus-eluting devices. Everolimus is a rapamycin analog that inhibits the mTOR pathway, reducing smooth muscle cell proliferation after stent placement and thus lowering restenosis risk. This distinguishes Xience from other drug-eluting stents that use sirolimus, zotarolimus, or paclitaxel. Sirolimus is an older mTOR inhibitor, zotarolimus is another mTOR inhibitor used in different stent platforms, and paclitaxel works by a different mechanism (microtubule stabilization). The everolimus-eluting design of Xience has been associated with favorable healing and restenosis outcomes compared with some older drug-eluting platforms.

8. A patient with LVAD develops sudden confusion, weakness, and trouble speaking. Which complication is most probable?

A. Stroke

B. RH failure

C. Depression

D. Device failure/death

In LVAD patients, sudden focal neurologic changes strongly point to a cerebrovascular event. The combination of sudden confusion, weakness, and trouble speaking suggests a stroke, which is a well-known and serious complication in LVAD recipients. Strokes can be ischemic from thromboembolism related to the device or its anticoagulation, or hemorrhagic due to anticoagulation balance and device-related factors. The signs localize to a brain territory responsible for language and motor function, often the left hemisphere (e.g., an MCA territory stroke). Other options don't fit the acute presentation as well. Right-sided heart failure would produce systemic congestion signs (edema, hepatomegaly, jugular venous distention) rather than abrupt focal neurologic deficits. Depression doesn't cause sudden weakness or language disturbance. Device failure would typically lead to pump-related hemodynamic collapse, low output symptoms, or system-wide instability rather than a focal neurologic event.

9. Which of the following is an indication for using an Impella?

A. Hemodynamically unstable patients

B. Stable CAD without instability

C. Normal LV function

D. No LV dysfunction

Impella is a temporary, percutaneous left ventricular assist device used to provide immediate circulatory support when the heart cannot maintain adequate systemic perfusion, such as in cardiogenic shock. In hemodynamically unstable patients, cardiac output is severely reduced, and rapidly stabilizing perfusion is critical; Impella unloads the left ventricle and delivers forward flow to the aorta, helping to raise mean arterial pressure and improve end-organ perfusion while potentially reducing myocardial work. This makes it an appropriate indication in unstable hemodynamics or cardiogenic shock, including scenarios like high-risk PCI where short-term LV support is needed. By contrast, stable CAD without instability, normal LV function, or no LV dysfunction do not require mechanical circulatory support, since the heart is meeting the body's circulation demands without intervention.

10. Which description correctly identifies the layer that anchors the vessel to surrounding tissues?

A. Tunica Adventitia

B. Tunica Media

C. Tunica Intima

D. Endothelium

Anchoring the vessel to surrounding tissues is the job of the outermost layer, the tunica adventitia. This layer is made of connective tissue rich in collagen (and some elastic fibers) that securely tethers the vessel to nearby structures and provides structural support. It also houses small vessels and nerves that supply the vessel wall (vasa vasorum) in larger vessels. The middle layer, tunica media, is primarily smooth muscle that controls vessel diameter and blood flow, not anchoring. The innermost layer, tunica intima, lines the lumen and consists of endothelial cells; endothelium is just the inner lining, not a tether to surrounding tissues. So the description fits the adventitia.

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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://invasivecardiology.examzify.com>

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

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