

Angio and IR Imaging 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. Which process can be used to maintain vessel patency after deployment?**
 - A. Clot dissolution**
 - B. Balloon-expandable stenting**
 - C. Fluid infusion**
 - D. Image-guided needle biopsy**
- 2. The vertebral arteries, along with the basilar artery and their branches, constitute which vascular system?**
 - A. Cerebral arterial system**
 - B. Vertebrobasilar system**
 - C. Common carotid system**
 - D. Subclavian system**
- 3. What two arteries supply blood to the brain?**
 - A. Internal carotid and subclavian arteries**
 - B. Aorta and vertebral arteries**
 - C. Internal carotid and vertebral arteries**
 - D. Common carotid and brachial arteries**
- 4. What drains the pelvic area and lower limbs?**
 - A. Femoral veins**
 - B. Iliac veins**
 - C. Jugular veins**
 - D. Radial veins**
- 5. Angiocardiography primarily images which two structures?**
 - A. Aorta and pulmonary veins**
 - B. Heart and associated structures**
 - C. Lungs and thoracic cavity**
 - D. Veins and arteries**

6. Arteries carry oxygenated blood in which direction relative to the heart?

- A. Toward the heart**
- B. Away from the heart**
- C. Through capillaries**
- D. Into the lungs**

7. Which artery originates directly from the arch of the aorta?

- A. Right common carotid artery**
- B. Left common carotid artery**
- C. Right subclavian artery**
- D. Left subclavian artery**

8. What type of imaging technique is primarily used for evaluating coronary arteries?

- A. X-ray angiography**
- B. CT angiography**
- C. MRI angiography**
- D. Ultrasound angiography**

9. What is the term for the mechanical removal of a clot?

- A. Thrombolysis**
- B. Thrombectomy**
- C. Angioplasty**
- D. Endarterectomy**

10. What vein curves posteriorly from the foramen magnum to join the superior sagittal sinus?

- A. Transverse sinus**
- B. Occipital sinus**
- C. Inferior sagittal sinus**
- D. Sphenoparietal sinus**

Answers

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

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Explanations

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1. Which process can be used to maintain vessel patency after deployment?

- A. Clot dissolution**
- B. Balloon-expandable stenting**
- C. Fluid infusion**
- D. Image-guided needle biopsy**

The process that can be utilized to maintain vessel patency after deployment is balloon-expandable stenting. This technique involves the placement of a stent—a small, mesh-like tube—into a narrowed or blocked portion of a blood vessel. After positioning the stent, a balloon is inflated within the stent to expand it, which helps to hold the vessel open and maintain blood flow. The balloon-expandable stent is specifically designed to keep the vessel open in a way that is both effective and durable, significantly reducing the likelihood of re-narrowing or occlusion, which may occur if other treatment options were used. This is crucial in interventional radiology and angioplasty procedures, where maintaining vessel patency is essential for optimal patient outcomes. Other processes mentioned, like clot dissolution, could address existing blockages but don't provide a structural solution to maintain vessel openness post-deployment. Fluid infusion can support blood flow but doesn't actively prevent vessel narrowing. An image-guided needle biopsy is a diagnostic procedure with no relevance to the maintenance of vessel patency. Thus, the balloon-expandable stenting stands out as the most effective approach for preventing vessel closure once a stent is deployed.

2. The vertebral arteries, along with the basilar artery and their branches, constitute which vascular system?

- A. Cerebral arterial system**
- B. Vertebrobasilar system**
- C. Common carotid system**
- D. Subclavian system**

The correct answer is the vertebrobasilar system, which is the vascular system formed by the vertebral arteries and the basilar artery and their branches. This system primarily supplies blood to the posterior part of the brain, including the brainstem, cerebellum, and the occipital lobes of the cerebrum. Understanding this system is crucial for recognizing how blood flow is distributed throughout the brain and for diagnosing and managing cerebrovascular diseases that affect this region. The vertebral arteries arise from the subclavian arteries and join to form the basilar artery at the base of the brain. Their branching provides essential circulation to key structures. This system is distinct from the cerebral arterial system, which encompasses the internal carotid arteries and their branches, primarily supplying the anterior and middle cerebral territories. The common carotid system refers generally to the major arteries supplying the head and neck, and the subclavian system involves branches of the subclavian artery that provide blood to the arms and other areas, but it does not specifically pertain to the posterior circulation of the brain as the vertebrobasilar system does. Thus, understanding these distinct systems highlights the specialized pathways of blood supply critical for neurological function.

3. What two arteries supply blood to the brain?

- A. Internal carotid and subclavian arteries
- B. Aorta and vertebral arteries
- C. Internal carotid and vertebral arteries**
- D. Common carotid and brachial arteries

The internal carotid and vertebral arteries are the primary sources of blood supply to the brain, making the correct choice essential for understanding cerebral circulation. The internal carotid arteries, which branch from the common carotid arteries, enter the skull and split into the anterior and middle cerebral arteries. These arteries are crucial for providing oxygenated blood to the majority of the cerebral hemispheres, particularly the frontal, parietal, and temporal lobes. The vertebral arteries, which branch off the subclavian arteries, ascend through the neck and enter the skull via the foramen magnum. They fuse at the base of the brain to form the basilar artery, which supplies the posterior regions of the brain, including the cerebellum and brainstem. This combination of the internal carotid and vertebral arteries ensures that the brain receives a rich supply of blood, which is vital for its metabolic needs. Understanding this dual supply is fundamental for diagnosing and managing various conditions affecting cerebral circulation.

4. What drains the pelvic area and lower limbs?

- A. Femoral veins
- B. Iliac veins**
- C. Jugular veins
- D. Radial veins

The iliac veins are responsible for draining the pelvic area and lower limbs. Specifically, they collect blood from various structures in the pelvis, such as the lower abdominal organs, and from the lower extremities via the femoral veins. The iliac veins are formed by the convergence of the external and internal iliac veins, which further progress to become the inferior vena cava as they ascend in the body. Understanding the anatomy and physiology of the venous system helps clarify the function of these veins. The iliac veins play a crucial role in returning deoxygenated blood to the heart after it has circulated through the lower extremities and pelvic area. In contrast, other veins listed do not serve this purpose: jugular veins primarily drain the head and neck, while radial veins drain the forearm and hand. Femoral veins also contribute to the drainage of the lower limbs but ultimately empty into the iliac veins, making the iliac veins the primary structures involved in this drainage process.

5. Angiocardiography primarily images which two structures?

- A. Aorta and pulmonary veins
- B. Heart and associated structures**
- C. Lungs and thoracic cavity
- D. Veins and arteries

Angiocardiography is a specialized imaging technique focused on visualizing the heart and its associated structures. This procedure primarily aims to assess the coronary arteries, heart chambers, and surrounding vascular system to diagnose various cardiac conditions, including congenital defects, coronary artery disease, and other cardiovascular issues. By injecting contrast material into the vascular system, clinicians can obtain detailed images that highlight the heart's anatomy and functionality. Options that refer to the aorta and pulmonary veins or veins and arteries do not encapsulate the complete scope of what angiocardiography targets, as they focus on specific vessels rather than the entire cardiac system. Similarly, imaging the lungs and thoracic cavity does not align with the primary goals of angiocardiography, which is more concentrated on the heart itself and the immediate structures related to it. Therefore, the emphasis on the heart and its associated structures correctly identifies the primary focus of angiocardiography, making it the most appropriate answer.

6. Arteries carry oxygenated blood in which direction relative to the heart?

- A. Toward the heart
- B. Away from the heart**
- C. Through capillaries
- D. Into the lungs

Arteries are blood vessels responsible for transporting oxygenated blood away from the heart to various tissues and organs throughout the body. This function is fundamental to maintaining the circulatory system, as delivering oxygen-rich blood is essential for cellular metabolism and overall health. For instance, when the left ventricle of the heart contracts, it sends oxygenated blood into the aorta, the largest artery in the body. From there, the aorta branches into smaller arteries that carry the blood to different regions. This directional flow - away from the heart - is crucial for ensuring that all body areas receive the oxygen and nutrients they need for proper function. The other options suggest different roles or pathways for blood, which are not characteristic of how arteries function. Blood does move toward the heart via veins, for example, and capillaries are the sites where exchange occurs, but they don't serve the same purpose as arteries in terms of transporting blood away from the heart.

7. Which artery originates directly from the arch of the aorta?

- A. Right common carotid artery**
- B. Left common carotid artery**
- C. Right subclavian artery**
- D. Left subclavian artery**

The left common carotid artery is unique among the major arteries branching from the aorta because it arises directly from the arch of the aorta. This distinguishes it from the right common carotid artery and the right subclavian artery, both of which originate from the brachiocephalic trunk. The left subclavian artery also arises directly from the arch of the aorta, but the question specifically asks for the artery that originates in a manner related to the common carotid arteries. Understanding the anatomy of the aortic arch and the branching patterns of these major arteries is crucial. The arch of the aorta typically gives rise to three main arteries: the brachiocephalic trunk, which subsequently bifurcates into the right common carotid and right subclavian arteries; the left common carotid artery; and the left subclavian artery. The direct origin of the left common carotid artery from the aorta confirms its significance in supplying blood to the left side of the head and neck, highlighting its uniqueness in this anatomical context.

8. What type of imaging technique is primarily used for evaluating coronary arteries?

- A. X-ray angiography**
- B. CT angiography**
- C. MRI angiography**
- D. Ultrasound angiography**

The primary imaging technique for evaluating coronary arteries is X-ray angiography, commonly referred to as conventional angiography or catheter angiography. This method involves the insertion of a catheter into a blood vessel, typically through the femoral or radial artery, which allows for direct visualization of the coronary arteries after injecting a contrast agent. X-ray angiography provides high-resolution images and is considered the gold standard for diagnosing coronary artery disease. It enables clinicians to assess the anatomy and function of the coronary arteries, identify blockages or stenoses, and plan appropriate interventions such as angioplasty or stent placement. The real-time nature of this procedure also allows for immediate decision-making during the catheterization process, which is crucial in urgent cases. While other imaging modalities like CT angiography, MRI angiography, and ultrasound angiography have their applications, X-ray angiography remains the most reliable technique for precise assessment of coronary artery conditions due to its high spatial resolution and ability to visualize vascular anatomy and pathology in detail.

9. What is the term for the mechanical removal of a clot?

- A. Thrombolysis
- B. Thrombectomy**
- C. Angioplasty
- D. Endarterectomy

The term for the mechanical removal of a clot is thrombectomy. Thrombectomy is a procedure specifically designed to surgically remove a blood clot from a blood vessel. This process is often used in cases where a clot is causing a blockage, leading to conditions such as strokes or deep vein thrombosis. Thrombectomy can involve the use of specialized devices, such as catheters or surgical instruments, to capture and extract the clot, restoring normal blood flow. This differentiates it from thrombolysis, which involves the use of medication to dissolve clots rather than physically removing them. Angioplasty involves the widening of narrowed or obstructed blood vessels, often using a balloon, while endarterectomy is a procedure aimed at removing atherosclerotic plaque from the arterial wall. Both of these procedures may involve addressing issues associated with clots, but they do not specifically refer to the process of clot removal.

10. What vein curves posteriorly from the foramen magnum to join the superior sagittal sinus?

- A. Transverse sinus
- B. Occipital sinus**
- C. Inferior sagittal sinus
- D. Sphenoparietal sinus

The vein that curves posteriorly from the foramen magnum to join the superior sagittal sinus is the occipital sinus. This sinus runs along the inner surface of the occipital bone and is positioned near the midline of the posterior cranial fossa. It receives blood from the veins draining the posterior aspect of the brain and connects with the superior sagittal sinus, which is critical for venous drainage from the brain. The anatomical relationship is significant as the occipital sinus plays a role in the overall venous system of the brain, allowing for the appropriate return of blood to the heart. Understanding this vessel is essential for comprehending cranial venous drainage and potential clinical implications in cases of pathologies involving the posterior skull or the superior sagittal sinus. The other options represent different sinuses or veins that have distinct pathways and functions within the cranial venous system.

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:

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

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