

DAVIES VASCULAR TECHNOLOGY (VT) PRACTICE TEST (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 is the normal diameter range for the abdominal aorta?**
 - A. 1-2 cm
 - B. 2-3 cm
 - C. 3-4 cm
 - D. 4-5 cm
- 2. A thrombus located in the gastrocnemius muscular vein can propagate proximally to which vein?**
 - A. Posterior Tibial Vein
 - B. Peroneal Vein
 - C. Popliteal Vein
 - D. Soleal Vein
- 3. In handheld TCD, the angle of the beam relative to flow is assumed to be?**
 - A. 45 degrees
 - B. 30 degrees
 - C. 0 degrees
 - D. 90 degrees
- 4. Which vein in the Antecubital Fossa connects the Cephalic and Basilic veins?**
 - A. Median Cubital Vein
 - B. Accessory Cephalic Vein
 - C. Radial Vein
 - D. Ulnar Vein
- 5. The most reliable method for diagnosing Pulmonary Embolism is?**
 - A. CT scan
 - B. Pulmonary angiography
 - C. Doppler ultrasound
 - D. X-ray

- 6. What may cause blockage of the lymphatic channels leading to lymphedema?**
- A. Chronic venous insufficiency
 - B. Nematode parasites
 - C. Blood clots
 - D. Fatty tissue deposits
- 7. What term best describes the desired properties of beam width when assessing carotid vessels?**
- A. High resolution
 - B. Narrow
 - C. Wide
 - D. Variable
- 8. What is a key feature of transient ischemic attacks compared to strokes?**
- A. They are always caused by a blood clot
 - B. They resolve within a specific time frame
 - C. They lead to permanent disability
 - D. They do not display any symptoms
- 9. What is the flow characteristic within the external carotid artery (ECA)?**
- A. Low resistance
 - B. High resistance
 - C. Very low resistance
 - D. Mixed resistance
- 10. What does an increase in peak systolic velocity in the Proximal ICA typically suggest?**
- A. Normal arterial function
 - B. Severe stenosis
 - C. Mild stenosis
 - D. Normal peak flow

Answers

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

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Explanations

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1. What is the normal diameter range for the abdominal aorta?

- A. 1-2 cm
- B. 2-3 cm**
- C. 3-4 cm
- D. 4-5 cm

The normal diameter range for the abdominal aorta is typically between 2-3 cm in adults. This range is important because it indicates the health and functionality of the aorta, which is the main artery that supplies blood from the heart to the rest of the body. If the diameter of the abdominal aorta exceeds this range, it may indicate conditions such as an aortic aneurysm, which can pose serious health risks. Knowing the normal diameter helps healthcare professionals assess and diagnose vascular conditions effectively. The other options either represent diameters that are too small or too large for a healthy adult aorta, which does not align with established medical standards.

2. A thrombus located in the gastrocnemius muscular vein can propagate proximally to which vein?

- A. Posterior Tibial Vein
- B. Peroneal Vein
- C. Popliteal Vein**
- D. Soleal Vein

A thrombus that forms in the gastrocnemius muscular vein can propagate proximally to the popliteal vein due to the anatomical relationships and blood flow dynamics in the lower extremities. The gastrocnemius veins, which are responsible for draining the gastrocnemius muscle, ultimately drain into the popliteal vein, which is formed by the confluence of the posterior tibial and anterior tibial veins. As the thrombus develops in the gastrocnemius vein, there is a potential for it to extend upward into the popliteal vein since there are no valves that impede blood flow from the muscular veins into the popliteal vein. This upward movement can increase the risk of the thrombus advancing to more central venous structures, leading to systemic complications such as deep vein thrombosis (DVT). Understanding this anatomical pathway is crucial for recognizing the potential for thrombus propagation within the venous system of the leg, especially in the context of conditions such as venous stasis or injury that might lead to thrombosis in the first place.

3. In handheld TCD, the angle of the beam relative to flow is assumed to be?

- A. 45 degrees
- B. 30 degrees
- C. 0 degrees**
- D. 90 degrees

In handheld transcranial Doppler (TCD) ultrasonography, the angle of the ultrasound beam relative to the direction of blood flow is crucial for accurate velocity measurements. When the angle is 0 degrees, it implies that the ultrasound beam is parallel to the direction of blood flow. This alignment maximizes the Doppler shift and ensures the most accurate calculation of flow velocities. In practice, this assumption allows for the most reliable data to be obtained regarding cerebral blood flow, which is essential for diagnosing conditions such as vascular occlusions, stenosis, or embolisms. Drawing on this principle, handheld TCD devices are designed to function optimally when the angle is close to zero, thereby providing meaningful clinical information. Other angle options, such as 45 degrees, 30 degrees, or 90 degrees, would lead to inaccuracies in velocity measurements due to the cosine effect, as the Doppler equation incorporates the angle of incidence when calculating velocities. Hence, having the angle at 0 degrees is integral for ensuring that the assessment of blood flow is both accurate and reliable.

4. Which vein in the Antecubital Fossa connects the Cephalic and Basilic veins?

- A. Median Cubital Vein**
- B. Accessory Cephalic Vein
- C. Radial Vein
- D. Ulnar Vein

The Median Cubital Vein is the primary vein that traverses the antecubital fossa and serves as a connector between the Cephalic and Basilic veins. This superficial vein is often used for venipuncture due to its prominent and accessible location, making it a common site for drawing blood. In the anatomical layout, the Cephalic vein runs laterally while the Basilic vein runs medially in the forearm. The Median Cubital vein lies centrally and provides a direct route for venous blood between these two key drainage pathways, playing an important role in venous return from the arm to the heart. Understanding this connection is crucial for clinical procedures and vascular assessments. Other options listed do not fulfill this specific connecting role or are associated with different regions or functions within the vascular system of the forearm.

5. The most reliable method for diagnosing Pulmonary Embolism is?

- A. CT scan
- B. Pulmonary angiography**
- C. Doppler ultrasound
- D. X-ray

Pulmonary angiography is considered the most reliable method for diagnosing pulmonary embolism because it directly visualizes the pulmonary arteries and can identify the presence of blood clots. This invasive procedure involves the injection of a contrast dye into the pulmonary arteries, allowing for real-time imaging through fluoroscopy. The high level of sensitivity and specificity offered by pulmonary angiography makes it the gold standard in diagnosing this condition, despite the risks associated with the procedure. While a CT scan, particularly a CT pulmonary angiography (CTPA), is a highly effective and non-invasive method that is often used for initial evaluation, pulmonary angiography remains definitive when further confirmation is needed or in cases where the CT findings are inconclusive. Doppler ultrasound is principally utilized for identifying deep vein thrombosis, which can be a source of pulmonary embolism but does not directly visualize the pulmonary arteries. X-rays have limited use in diagnosing pulmonary embolism as they can often appear normal or show nonspecific findings in affected patients. Therefore, pulmonary angiography stands out as the most reliable method for confirming the diagnosis of pulmonary embolism.

6. What may cause blockage of the lymphatic channels leading to lymphedema?

- A. Chronic venous insufficiency
- B. Nematode parasites**
- C. Blood clots
- D. Fatty tissue deposits

*Lymphedema occurs when lymphatic channels become blocked or damaged, leading to a buildup of lymph fluid, typically resulting in swelling, particularly in the extremities. Nematode parasites, particularly those such as *Wuchereria bancrofti*, are known to cause lymphatic filariasis, which is a significant cause of lymphedema in endemic areas. These parasites invade the lymphatic system and disrupt its normal function, resulting in inflammation and obstruction of lymphatic channels, ultimately leading to the classic symptoms associated with lymphedema. While chronic venous insufficiency, blood clots, and fatty tissue deposits can impact the vascular system and contribute to swelling, they do not specifically cause lymphatic channel blockage in the manner that nematode parasites do. Each of those conditions may lead to lymphatic dysfunction indirectly, but they do not directly interfere with the lymphatic vessels as nematodes do. Therefore, the linking of parasitic infection with the direct blockage of lymphatic channels highlights the uniqueness of this causal relationship in the development of lymphedema.*

7. What term best describes the desired properties of beam width when assessing carotid vessels?

- A. High resolution
- B. Narrow**
- C. Wide
- D. Variable

The term that best describes the desired properties of beam width when assessing carotid vessels is narrow. A narrow beam width is advantageous in vascular ultrasound because it enhances the resolution of the images obtained from the carotid arteries. This improved resolution allows for more precise visualization of the vascular structures, making it easier to identify abnormalities such as plaques, stenosis, or other vascular pathologies with greater accuracy. When evaluating the carotid vessels, a narrow beam width focuses the ultrasound energy into a smaller area. This results in a clearer and more detailed image of the vascular anatomy, which is crucial for accurate diagnosis and assessment of blood flow. In contrast, a wide beam may lead to lower resolution images that could obscure relevant details, making it difficult to detect subtle pathological changes. Therefore, a narrow beam width is preferred for effective and reliable assessment of the carotid arteries during ultrasound examinations.

8. What is a key feature of transient ischemic attacks compared to strokes?

- A. They are always caused by a blood clot
- B. They resolve within a specific time frame**
- C. They lead to permanent disability
- D. They do not display any symptoms

Transient ischemic attacks (TIAs) are often characterized by symptoms that resolve within a specific time frame, typically within 24 hours, and usually within minutes to a few hours. This temporary nature distinguishes TIAs from strokes, which result in lasting brain damage and potentially lead to permanent disabilities. The symptoms experienced during a TIA are similar to those of a stroke, such as weakness, speech difficulties, and vision problems, but because they are temporary and resolve completely, they do not leave lasting effects like a stroke does. The other features associated with TIAs, such as that they can be caused by blood clots, do not make them uniquely different from strokes, as strokes can also be caused by blood clots or bleeding in the brain. Furthermore, TIAs do exhibit symptoms, contrasting with the notion that they do not display any symptoms, which is incorrect. Hence, the clarity regarding the time-bound nature of TIA symptoms is a crucial point for understanding their distinction from strokes.

9. What is the flow characteristic within the external carotid artery (ECA)?

- A. Low resistance
- B. High resistance**
- C. Very low resistance
- D. Mixed resistance

The flow characteristic within the external carotid artery (ECA) is classified as high resistance. This is primarily due to the ECA supplying blood to several branches that are associated with structures that do not have high metabolic demands. These branches include the facial artery and others that primarily supply skin and muscles of the neck and face. High resistance flow is indicated by a sharp systolic upstroke and a dicrotic notch in the Doppler waveform, consistent with the flow patterns observed in the ECA. In contrast, internal carotid arteries, which supply the brain, typically exhibit low resistance characteristics because of the high metabolic needs of brain tissue, leading to continuous forward flow without significant fluctuation. Understanding the resistance patterns of different arterial supplies helps in assessing vascular conditions and conducting Doppler evaluations effectively.

10. What does an increase in peak systolic velocity in the Proximal ICA typically suggest?

- A. Normal arterial function
- B. Severe stenosis**
- C. Mild stenosis
- D. Normal peak flow

An increase in peak systolic velocity in the Proximal Internal Carotid Artery (ICA) typically suggests severe stenosis. This is because significant narrowing of the artery due to stenosis causes the blood to flow more rapidly through the constricted area, leading to higher velocities as measured with Doppler ultrasound. In vascular sonography, specific velocity thresholds are used to interpret the degree of stenosis. A very high peak systolic velocity in this region is often indicative of critical narrowing that can increase the risk of ischemic events such as stroke. Normal arterial function or peak flow would not present with elevated peak systolic velocities, as these conditions typically reflect unobstructed blood flow. Mild stenosis may have a small increase in peak systolic velocity, but it would not reach the levels seen with severe stenosis. Therefore, the association of increased peak systolic velocity in the Proximal ICA with severe stenosis aligns with the principles of vascular assessment and is a key aspect of analyzing carotid artery health.

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://daviesvascular.examzify.com>

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

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