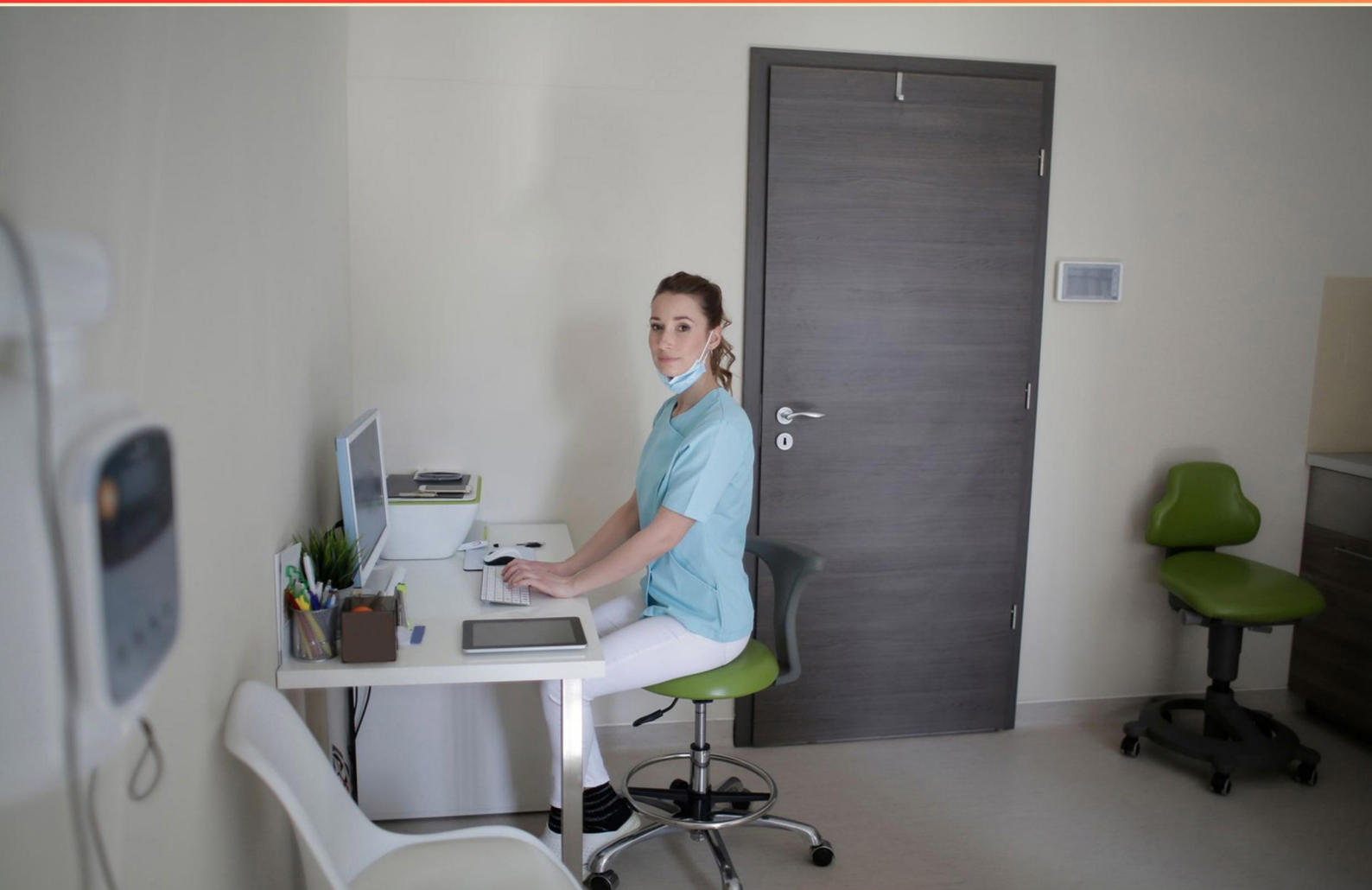


BONENT CERTIFIED HEMODIALYSIS TECHNOLOGIST/ TECHNICIAN (CHT) PRACTICE EXAM (SAMPLE)

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 hormone helps in regulating the body's calcium levels?**
 - A. Erythropoietin
 - B. Calcitriol
 - C. Aldosterone
 - D. Insulin

- 2. What does a positive thrill indicate when assessing a fistula?**
 - A. Severe infection
 - B. Working blood flow
 - C. Blood clot
 - D. Low blood pressure

- 3. What is a common cause of pseudoaneurysm?**
 - A. Excessive use of anticoagulants
 - B. Needle sites not being rotated
 - C. Inadequate disinfection of the dialysis equipment
 - D. Use of expired materials during treatment

- 4. Which term describes the transport that occurs when molecules are carried along with a solvent through a semipermeable membrane?**
 - A. Diffusion
 - B. Convection
 - C. Osmosis
 - D. Filtration

- 5. What substance is commonly added to municipal water supply to enhance its clarity?**
 - A. Alum
 - B. Chlorine
 - C. Fluoride
 - D. Sodium Bicarbonate

- 6. What is the acceptable potassium level range in mEq/L?**
- A. 2.5-3.5
 - B. 3.0-4.0
 - C. 3.5-5.5
 - D. 4.0-6.0
- 7. What is the maximum allowable total endotoxin count in dialysis fluid?**
- A. 0.5 EU/ml
 - B. 1 EU/ml
 - C. 2 EU/ml
 - D. 10 EU/ml
- 8. In which direction should the venous needle be placed during dialysis?**
- A. Retrograde
 - B. Transverse
 - C. Antegrade
 - D. Lateral
- 9. What is the kuf range for high-efficiency dialyzers?**
- A. 2.0-5.0
 - B. 5.0-12.0
 - C. 10.0-15.0
 - D. 12.0-20.0
- 10. What does TCV measure?**
- A. Measures the volume of blood in the body
 - B. Measures the efficiency of kidney function
 - C. Measures the ability of the dialyzer to transport solutes
 - D. Measures the rate of blood flow during dialysis

Answers

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

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Explanations

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1. Which hormone helps in regulating the body's calcium levels?

- A. Erythropoietin
- B. Calcitriol**
- C. Aldosterone
- D. Insulin

Calcitriol is the active form of vitamin D and plays a crucial role in regulating the body's calcium and phosphorus levels. It is produced in the kidneys and acts to increase the absorption of calcium and phosphorus from the gastrointestinal tract, promote calcium reabsorption in the kidneys, and mobilize calcium from the bones when necessary. By enhancing the availability of calcium in the blood, calcitriol helps to ensure that various physiological processes that depend on calcium, such as muscle contraction and nerve transmission, function optimally. Erythropoietin is primarily involved in stimulating red blood cell production rather than regulating calcium levels. Aldosterone is a hormone that helps regulate sodium and potassium levels and has an effect on blood pressure but does not play a direct role in calcium homeostasis. Insulin is mainly responsible for glucose metabolism and promoting the uptake of glucose by cells and does not have a significant role in calcium regulation.

2. What does a positive thrill indicate when assessing a fistula?

- A. Severe infection
- B. Working blood flow**
- C. Blood clot
- D. Low blood pressure

A positive thrill when assessing a fistula indicates working blood flow. The presence of a thrill—an audible vibration felt over the fistula site—demonstrates that blood is flowing through the vascular access efficiently. This is a critical assessment for patients with fistulas, as it confirms that the access is functioning properly for hemodialysis. In this context, a thrill is a sign that the fistula has matured and that an adequate volume of blood is being passed through it, which is essential for the dialysis process to be effective. If the thrill is absent or diminished, it may suggest potential complications, which would require further investigation. In contrast, other scenarios such as severe infection, blood clot, or low blood pressure do not directly correlate with the presence of a thrill. Severe infection might lead to other clinical signs and symptoms, while a blood clot could result in a loss of thrill altogether. Low blood pressure is a systemic issue and doesn't specifically indicate the status of the fistula itself. Therefore, a positive thrill is a clear indicator of effective blood flow in a functioning fistula.

3. What is a common cause of pseudoaneurysm?

- A. Excessive use of anticoagulants
- B. Needle sites not being rotated**
- C. Inadequate disinfection of the dialysis equipment
- D. Use of expired materials during treatment

Pseudoaneurysm is often associated with complications arising from the access sites used for dialysis, particularly when needles are repeatedly placed in the same location without sufficient rotation. If the same entry point is used continuously, it can lead to trauma and damage to the blood vessel wall, potentially resulting in the formation of a pseudoaneurysm. This occurs because the repeated puncturing can weaken the vessel and cause blood to leak out, accumulating outside the vessel wall while still being contained by the surrounding tissue. Rotating needle sites helps distribute the stress and trauma across a wider area, minimizing the risk of vessel damage and subsequent complications such as pseudoaneurysm. Therefore, proper site rotation is a critical best practice in dialysis care to prevent this and other access-related complications.

4. Which term describes the transport that occurs when molecules are carried along with a solvent through a semipermeable membrane?

- A. Diffusion
- B. Convection**
- C. Osmosis
- D. Filtration

The term that accurately describes the transport occurring when molecules are carried along with a solvent through a semipermeable membrane is convection. In this process, not only do the solvent molecules move, but they also carry solute molecules along with them, leading to a more comprehensive movement that can include larger particles. This is particularly relevant in situations like hemodialysis, where a mixture of substances is transported across membranes because of the flow of the solvent. In contrast, diffusion refers specifically to the movement of solute molecules from an area of higher concentration to an area of lower concentration, without the displacement of solvent. Osmosis is more focused on the movement of water through a semipermeable membrane toward a higher solute concentration. Filtration involves the movement of fluid and solutes driven by pressure, which is different from the process described in the question. Thus, convection is the correct answer as it encompasses the transport of molecules together with the solvent through a semipermeable membrane.

5. What substance is commonly added to municipal water supply to enhance its clarity?

- A. Alum**
- B. Chlorine
- C. Fluoride
- D. Sodium Bicarbonate

Alum, or aluminum sulfate, is frequently added to municipal water supplies as a coagulant in the water treatment process. Its primary function is to improve water clarity by causing small particles and impurities in the water to clump together. This process, known as coagulation, facilitates the removal of these particles during subsequent filtration, resulting in clearer and cleaner water. Through this mechanism, alum significantly enhances the aesthetic quality of drinking water by removing turbidity caused by suspended particles. The other substances mentioned have different purposes in water treatment. Chlorine, for instance, is primarily used as a disinfectant to kill harmful bacteria and viruses in the water but does not directly work to clear the water of suspended particles. Fluoride is added to promote dental health but, like chlorine, does not play a role in improving water clarity. Sodium bicarbonate is often used to adjust the pH level of water, which is important for maintaining water quality but does not contribute to enhancing clarity.

6. What is the acceptable potassium level range in mEq/L?

- A. 2.5-3.5
- B. 3.0-4.0
- C. 3.5-5.5**
- D. 4.0-6.0

The acceptable potassium level range in mEq/L for a healthy adult is typically between 3.5 and 5.5. This range is critical because potassium plays a vital role in many physiological processes, including nerve function and muscle contraction, particularly in the heart. Maintaining potassium levels within this range is essential in hemodialysis patients, as they often face challenges in regulating electrolyte balance due to impaired kidney function. Deviations from this range can lead to serious complications, such as hyperkalemia (elevated potassium levels) which can result in dangerous cardiac arrhythmias. Thus, recognizing that 3.5 to 5.5 mEq/L is the standard for normal potassium levels highlights the importance of monitoring and managing potassium levels appropriately in patients undergoing hemodialysis.

7. What is the maximum allowable total endotoxin count in dialysis fluid?

- A. 0.5 EU/ml
- B. 1 EU/ml**
- C. 2 EU/ml
- D. 10 EU/ml

The maximum allowable total endotoxin count in dialysis fluid is 1 EU/ml. This limit is established to ensure patient safety and prevent adverse reactions during hemodialysis treatments. Endotoxins, which are toxins associated with the outer membrane of certain bacteria, can trigger severe inflammatory responses and pose significant health risks to patients undergoing dialysis. Setting the limit at 1 EU/ml allows for a balance between maintaining rigorous safety standards while ensuring the practical usability of dialysis fluid. Regular monitoring and adherence to this standard are crucial in mitigating the risks of pyrogenic reactions, which can cause fever, chills, and more severe complications in susceptible patients. This regulation helps safeguard the health and safety of patients receiving renal replacement therapy.

8. In which direction should the venous needle be placed during dialysis?

- A. Retrograde
- B. Transverse
- C. Antegrade**
- D. Lateral

The placement of the venous needle in an antegrade direction is essential in hemodialysis to ensure optimal blood flow and to reduce the risk of complications during the procedure. When the venous needle is inserted in an antegrade position, it allows for blood to flow directly toward the dialysis machine, thereby facilitating effective removal of dialysis waste products and excess fluid from the blood. Using the antegrade technique, blood is drawn out of the patient in the most efficient manner, minimizing turbulence and potential damage to the vessel. This correct placement can also help in maintaining a stable blood flow rate throughout the treatment. In contrast, other needle placements such as retrograde could lead to a reverse flow, posing risks to the patient's vascular access. Transverse or lateral placements generally do not align with standard practice guidelines for venous needle insertion, which emphasize the antegrade approach for its effectiveness and safety in hemodialysis sessions.

9. What is the kuf range for high-efficiency dialyzers?

- A. 2.0-5.0
- B. 5.0-12.0**
- C. 10.0-15.0
- D. 12.0-20.0

High-efficiency dialyzers are designed to effectively remove solutes from the blood during hemodialysis, and their performance is often measured by the clearance values expressed in terms of the "kuf" range, which refers to the ultrafiltration coefficient. The correct range for high-efficiency dialyzers is typically between 5.0-12.0. This indicates a significant ability to remove excess fluids while also achieving the desired solute clearance levels, which is essential in managing the patient's overall fluid balance and improving treatment outcomes. This kinematic parameter reflects the dialyzer's ability to facilitate adequate ultrafiltration, ensuring that patients undergoing hemodialysis receive effective treatment for their condition. This aspect is vital in ensuring that all patients maintain optimal fluid levels in their bodies, especially considering the risks of fluid overload in individuals with renal insufficiency.

10. What does TCV measure?

- A. Measures the volume of blood in the body
- B. Measures the efficiency of kidney function
- C. Measures the ability of the dialyzer to transport solutes**
- D. Measures the rate of blood flow during dialysis

TCV, or Total Cell Volume, is a measure that specifically relates to the functionality of the dialyzer in a hemodialysis treatment. It quantifies the capability of the dialyzer to transport solutes between the blood and the dialysis fluid, which is critical for determining how effectively waste products and excess fluids are removed from the blood during dialysis sessions. Understanding TCV is essential, as it helps clinicians assess whether the dialyzer is performing optimally and ensures that the patient's treatment is effective. A properly functioning dialyzer and its ability to transport solutes significantly influence patient outcomes and the overall effectiveness of the hemodialysis process.

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://bonentcht.examzify.com>

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

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