

# American Society for Clinical Pathology (ASCP) Histotechnician Certification Practice Exam (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 of the following stains is commonly used to identify cellular components in tissue sections?**
  - A. Giemsa stain**
  - B. Hematoxylin and eosin (H&E) stain**
  - C. Gram stain**
  - D. Trichrome stain**
- 2. If a patient states they are not fasting, what should the phlebotomist do?**
  - A. Proceed with the sample collection regardless**
  - B. Ask the patient's nurse if the sample should be collected**
  - C. Cancel the blood draw**
  - D. Inform the patient that fasting is not required at this time**
- 3. What is the appropriate procedure for cleaning a tourniquet before use?**
  - A. Must be wiped down with 70 percent alcohol between patients**
  - B. Must be sterilized in an autoclave**
  - C. Should be replaced after each use**
  - D. Can be cleaned with soap and water**
- 4. Which plasma protein is not found in serum?**
  - A. Albumin**
  - B. Globulin**
  - C. Fibrinogen**
  - D. Serum amyloid P**
- 5. In a clinical laboratory, what is one of the main benefits of regular centrifuge checks every three months?**
  - A. To avoid contamination of samples**
  - B. To maintain equipment efficiency and accuracy**
  - C. To reduce laboratory costs**
  - D. To ensure proper waste disposal**

**6. What can be concluded about the use of valves in veins?**

- A. They allow blood to flow backward**
- B. They prevent blood from flowing toward the heart**
- C. They help facilitate unidirectional blood flow**
- D. They are absent in all major veins**

**7. What condition could negatively affect the quality of a finger stick blood specimen?**

- A. Cold fingers**
- B. Swollen fingers**
- C. Dry skin**
- D. Superficial veins**

**8. When preparing a site for venipuncture, which of the following is not mandated?**

- A. Always start with using iodine**
- B. Wear gloves**
- C. Clean the site with an antiseptic**
- D. Use a tourniquet**

**9. Which blood samples can be affected the most by glycolysis interference?**

- A. Whole blood samples**
- B. Plasma samples**
- C. Serum samples**
- D. Capillary blood samples**

**10. If a phlebotomist performs a venipuncture without disinfecting the site and leaves the tourniquet on too long, what is this considered?**

- A. Malpractice**
- B. Negligence**
- C. Protocol error**
- D. Standard deviation**

## **Answers**

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

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## **Explanations**

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**1. Which of the following stains is commonly used to identify cellular components in tissue sections?**

- A. Giemsa stain**
- B. Hematoxylin and eosin (H&E) stain**
- C. Gram stain**
- D. Trichrome stain**

Hematoxylin and eosin (H&E) stain is widely utilized in histology because it effectively highlights the structure and cellular components within tissue sections. Hematoxylin stains nuclei blue or purple, allowing for clear visualization of nuclear detail, while eosin stains the cytoplasm and extracellular matrix in varying shades of pink. This dual staining technique provides a comprehensive overview of the tissue architecture, making it invaluable in diagnostics. The other staining options serve different purposes: Giemsa stain is primarily employed in the examination of blood smears and cytological samples, focusing on nucleic acids and certain cellular inclusions; Gram stain differentiates bacteria based on their cell wall properties; and trichrome stain is typically used to identify connective tissue components and highlight fibrosis in tissue sections. While each of these stains is significant in its own right, H&E remains the cornerstone of histopathological examination due to its broad applicability and the clarity it provides in assessing tissue morphology.

**2. If a patient states they are not fasting, what should the phlebotomist do?**

- A. Proceed with the sample collection regardless**
- B. Ask the patient's nurse if the sample should be collected**
- C. Cancel the blood draw**
- D. Inform the patient that fasting is not required at this time**

In a situation where a patient indicates that they are not fasting, the appropriate course of action is to consult with the patient's nurse regarding whether to proceed with the sample collection. This approach is important because certain laboratory tests require fasting to ensure accurate results, while others do not. The nurse may have specific information about the tests being ordered and whether a non-fasting sample is acceptable. This ensures that the phlebotomist adheres to the protocol necessary for obtaining accurate and reliable test results. Gathering input from the healthcare team helps to clarify any misconceptions about the necessity of fasting for the specific lab tests ordered, ultimately promoting patient safety and quality of care. It's a decision that involves collaboration, ensuring that the phlebotomist is aligned with the clinical needs of the patient.

### 3. What is the appropriate procedure for cleaning a tourniquet before use?

- A. Must be wiped down with 70 percent alcohol between patients**
- B. Must be sterilized in an autoclave**
- C. Should be replaced after each use**
- D. Can be cleaned with soap and water**

Wiping down a tourniquet with 70 percent alcohol between patients is the appropriate procedure because this concentration of alcohol effectively kills most bacteria, viruses, and fungi, thus minimizing the risk of cross-contamination between patients. This practice is critical in maintaining the integrity of infection control protocols in clinical settings. Using a lower concentration of alcohol may not provide the same efficacy, and while sterilization methods like autoclaving ensure that equipment is free from all microorganisms, they are not practical for items that cannot withstand high temperatures or moisture. Replacing the tourniquet after each use is excessive and not typically required, as frequent cleaning is generally sufficient for maintaining hygiene. Cleaning with soap and water may not achieve the level of disinfection necessary for effectively combating pathogens, especially in a healthcare environment. Therefore, utilizing 70 percent alcohol strikes the right balance between practicality and the need for effective disinfection.

### 4. Which plasma protein is not found in serum?

- A. Albumin**
- B. Globulin**
- C. Fibrinogen**
- D. Serum amyloid P**

Fibrinogen is a plasma protein that is not found in serum because it is involved in blood clotting and is consumed when a blood clot forms. When blood is allowed to clot, fibrinogen is converted to fibrin, which participates in the formation of the clot. After the clotting process, the liquid that remains is serum, which lacks fibrinogen and other clotting factors. Therefore, in serum, fibrinogen is absent, making it distinct from plasma, which still contains this protein. On the other hand, albumin and globulin are both proteins that remain in serum after the clotting process because they are not involved in coagulation. Serum amyloid P is also part of the serum protein composition but serves a different role related to immune response and inflammation, further establishing that fibrinogen is the only protein not found in serum post-clotting.

**5. In a clinical laboratory, what is one of the main benefits of regular centrifuge checks every three months?**

- A. To avoid contamination of samples**
- B. To maintain equipment efficiency and accuracy**
- C. To reduce laboratory costs**
- D. To ensure proper waste disposal**

Regular centrifuge checks every three months are vital for maintaining equipment efficiency and accuracy. Centrifuges are crucial in clinical laboratories for separating components of blood and other samples based on density through the application of centrifugal force. Over time, components can wear down or become misaligned, leading to reduced performance. By conducting regular checks, laboratory personnel can ensure that the centrifuge operates at the correct speed and temperature, check for any vibrations or unusual sounds that may indicate malfunction, and verify that the calibration is still correct. This routine maintenance minimizes the risk of inaccurate results, which could lead to misdiagnosis or inappropriate patient management, thus upholding the integrity of laboratory operations. While avoiding contamination, reducing costs, and ensuring proper waste disposal are also important facets of laboratory management, the direct impact of regular checks on the centrifuge focuses specifically on maintaining its operational capability and reliability, making it integral to achieving consistent and accurate laboratory results.

**6. What can be concluded about the use of valves in veins?**

- A. They allow blood to flow backward**
- B. They prevent blood from flowing toward the heart**
- C. They help facilitate unidirectional blood flow**
- D. They are absent in all major veins**

Valves in veins are crucial structures that contribute to the circulatory system's efficiency. Their primary function is to facilitate unidirectional blood flow towards the heart, preventing blood from flowing backward. This is especially important in the veins of the limbs, where blood travels against the force of gravity to return to the heart. When the muscles surrounding these veins contract, they help push the blood towards the heart, and the valves close to ensure that the blood does not flow back down the vein. This mechanism is vital in maintaining adequate circulation and preventing venous pooling, which can lead to conditions such as varicose veins. The presence of these valves is a significant adaptation that aids in the effective return of venous blood, particularly during physical activity. In contrast, the other options do not accurately describe the function of veins and their valves. Valves do not allow blood to flow backward or prevent flow toward the heart; rather, they ensure that blood moves in one direction. Additionally, valves are present in many major veins, particularly in the extremities, and are not absent in all major veins. Understanding the role of these valves is essential for comprehending the overall dynamics of the circulatory system.

**7. What condition could negatively affect the quality of a finger stick blood specimen?**

- A. Cold fingers**
- B. Swollen fingers**
- C. Dry skin**
- D. Superficial veins**

The condition that negatively affects the quality of a finger stick blood specimen is swollen fingers. Swelling can occur due to various reasons such as inflammation, fluid retention, or infection, which can lead to the distortion of blood vessels and tissues. This distortion can make it difficult to properly puncture the skin and obtain a good quality blood sample, potentially leading to hemolysis or contamination of the specimen. Additionally, swollen fingers can reduce blood flow and complicate the ability to collect an adequate volume of blood, thereby affecting the overall reliability of the results obtained from the specimen. Informed specimen collection practices ensure that the conditions are optimal for accurate analysis, and swelling is a clear impediment to achieving this goal. In contrast, while cold fingers, dry skin, and superficial veins may present challenges during blood collection, they do not typically have as significant an impact on the quality of the blood specimen itself compared to the effects of swelling.

**8. When preparing a site for venipuncture, which of the following is not mandated?**

- A. Always start with using iodine**
- B. Wear gloves**
- C. Clean the site with an antiseptic**
- D. Use a tourniquet**

The correct answer is based on an understanding of the recommended practices for preparing a site for venipuncture. Beginning with the application of iodine is not universally mandated as the primary antiseptic. While iodine is frequently used as a skin antiseptic due to its effectiveness in reducing bacteria on the skin, it is not required in all protocols. Alternatives such as chlorhexidine or alcohol swabs can also be used effectively to prepare the skin without a universal mandate for iodine. Wearing gloves is essential for protecting both the healthcare provider and the patient, adhering to standard precautions. Cleaning the site with an antiseptic is critical to prevent infection at the site of puncture, a well-accepted practice in venipuncture procedures. A tourniquet is commonly applied to make veins more visible and accessible but is also not mandated as part of the procedure and can be substituted with other techniques if necessary. Therefore, the use of iodine specifically as the mandated antiseptic is not a requirement.

**9. Which blood samples can be affected the most by glycolysis interference?**

- A. Whole blood samples**
- B. Plasma samples**
- C. Serum samples**
- D. Capillary blood samples**

The interference of glycolysis is most significant in serum samples due to the breakdown of glucose by cells that remain in the sample after clot formation. Glycolysis, the metabolic pathway that converts glucose into pyruvate, can continue in the serum even after blood collection, leading to a decrease in glucose concentration. This is particularly important because serum is derived from the blood after clotting; thus, all cellular elements are removed, yet any residual red blood cells or platelets can still metabolize glucose. In contrast, whole blood samples may present different glucose levels primarily due to the immediate presence of cellular components that can still be metabolically active before processing. Plasma samples, which are derived from anticoagulated whole blood, experience a lesser degree of glycolysis interference before immediate separation, as anticoagulants help stop the metabolism temporarily. Capillary blood samples, while also exposed to potential glycolytic activity, usually reflect concentrations that are closely aligned with blood glucose levels without the same level of interference seen in serum. Thus, serum glucose levels are more susceptible to changes caused by glycolysis, making it the correct answer to the question.

**10. If a phlebotomist performs a venipuncture without disinfecting the site and leaves the tourniquet on too long, what is this considered?**

- A. Malpractice**
- B. Negligence**
- C. Protocol error**
- D. Standard deviation**

The situation described is classified as negligence because it involves a failure to exercise the level of care that a reasonably prudent person would have exercised in a similar situation. In the context of phlebotomy, appropriate protocols dictate that the site must be disinfected to prevent infection, and the tourniquet should not be left on for an extended period to avoid complications such as hemolysis or discomfort to the patient. When the phlebotomist neglects these critical steps, it indicates a lack of attention to the established standards of care that should be followed in a medical setting. Negligence is typically highlighted in cases where an individual or entity deviates from the expected norm, resulting in harm or potential harm to the patient. Therefore, the absence of disinfection and extended tourniquet application exemplifies a breach of duty of care, aligning with the definition of negligence. In contrast, while malpractice can refer to a more serious violation that generally involves a licensed professional, protocol errors specifically refer to mistakes made in following established procedures rather than the legal implications of harm not fulfilling care standards. Lastly, standard deviation is a statistical term used to measure variation and is not applicable in this context.

# 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://ascp.examzify.com>**

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

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