

# NCCT Phlebotomy Technician (NCPT) Practice Exam (Sample)

## Study Guide



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**SAMPLE**

## **Questions**

- 1. Which of the following should be done with sharp items post-use?**
  - A. Rinsed and reused**
  - B. Stored for later use**
  - C. Placed in puncture-resistant containers**
  - D. Thrown in regular trash**
- 2. Which of the following is a key component of the immune response?**
  - A. Platelets**
  - B. Red blood cells**
  - C. White blood cells**
  - D. Plasma**
- 3. What is the primary function of arterioles?**
  - A. to collect blood from capillaries**
  - B. to maintain blood pressure**
  - C. to regulate blood flow to capillaries**
  - D. to transport oxygen-rich blood**
- 4. Workers exposed to blood or body fluids should be vaccinated with which vaccine?**
  - A. Flu**
  - B. MMR**
  - C. Tetanus**
  - D. Hepatitis B**
- 5. What role does Sodium Citrate serve in laboratory testing?**
  - A. Anticoagulant in lavender top tubes**
  - B. Anticoagulant in blue top tubes**
  - C. Preservative for urine samples**
  - D. Culture medium for bacterial growth**

- 6. What is the main purpose of the lymphatic system?**
- A. to transport oxygen**
  - B. to help with digestion**
  - C. to restore fluid balance in the body**
  - D. to produce hormones**
- 7. What is a characteristic of tests classified as waived?**
- A. They require a high level of expertise**
  - B. They must be performed in a clinical setting**
  - C. They are simple enough for non-laboratory personnel to conduct**
  - D. They require extensive validation and verification**
- 8. How does EDTA function as an anticoagulant?**
- A. By preventing platelet aggregation**
  - B. By binding to sodium**
  - C. By binding calcium**
  - D. By lowering blood viscosity**
- 9. What is an appropriate way to address an elderly patient?**
- A. By their first name only**
  - B. Using informal titles**
  - C. By calling them Miss, Mrs., or Mr.**
  - D. Using their full name**
- 10. If blood does not appear in an evacuated tube during venipuncture, what should a phlebotomist do first?**
- A. Call for assistance**
  - B. Replace the needle**
  - C. Slightly reposition the needle**
  - D. Try a different vein**

## **Answers**

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

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## **Explanations**

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**1. Which of the following should be done with sharp items post-use?**

- A. Rinsed and reused**
- B. Stored for later use**
- C. Placed in puncture-resistant containers**
- D. Thrown in regular trash**

The best practice for handling sharp items after use is to place them in puncture-resistant containers. This approach is essential for maintaining safety in clinical and laboratory environments. Puncture-resistant containers, often referred to as sharps containers, are specifically designed to prevent needle stick injuries and reduce the risk of exposure to potentially infectious materials. By using these designated containers, you ensure that sharp items are securely stored until they can be disposed of properly, minimizing the risk of injury to healthcare workers and others who may come into contact with waste. Using containers that are puncture-resistant is crucial, as other methods, such as rinsing and reusing or throwing sharp items in the regular trash, can significantly increase the risk of injuries, infections, and contamination. After sharp items are used, they should never be stored for later use due to the potential hazards they pose.

**2. Which of the following is a key component of the immune response?**

- A. Platelets**
- B. Red blood cells**
- C. White blood cells**
- D. Plasma**

The immune response is primarily mediated by white blood cells, also known as leukocytes. These cells play a crucial role in identifying and combatting pathogens such as bacteria, viruses, and other foreign invaders. They are key players in both the innate immune response, which provides immediate defense against infection, and the adaptive immune response, which involves the creation of antibodies and memory cells for long-term protection. White blood cells encompass various types, including neutrophils, lymphocytes (such as T cells and B cells), monocytes, eosinophils, and basophils, each having specific functions in the immune system. For instance, lymphocytes are essential for recognizing antigens and orchestrating the immune response, while neutrophils are among the first responders to sites of infection. In contrast, platelets are primarily involved in blood clotting, red blood cells are responsible for transporting oxygen throughout the body, and plasma serves as the liquid component of blood, carrying various substances, including nutrients, hormones, and waste products. While these components are essential for overall health and bodily function, they do not play a direct role in the immune response like white blood cells do.

### 3. What is the primary function of arterioles?

- A. to collect blood from capillaries
- B. to maintain blood pressure
- C. to regulate blood flow to capillaries**
- D. to transport oxygen-rich blood

The primary function of arterioles is to regulate blood flow to capillaries. Arterioles are small blood vessels that branch out from arteries and lead into capillary networks. By constricting or dilating, arterioles can alter their diameter, which directly affects the volume of blood flowing into the capillaries. This regulation is crucial because it helps control blood pressure and directs blood towards tissues that are in greater need of oxygen and nutrients at any given moment. Their ability to finely adjust blood flow is an important mechanism in maintaining homeostasis and ensuring that different tissues receive adequate blood supply based on their metabolic needs.

### 4. Workers exposed to blood or body fluids should be vaccinated with which vaccine?

- A. Flu
- B. MMR
- C. Tetanus
- D. Hepatitis B**

Vaccination with the Hepatitis B vaccine is essential for workers who are exposed to blood or body fluids because Hepatitis B is a highly infectious virus that can be transmitted through contact with infected blood. Health care professionals, first responders, and others in similar fields are at significant risk of exposure to blood, making this vaccine a critical component of occupational health and safety protocols. The Hepatitis B vaccine is effective in preventing the infection, which can lead to serious health complications, including chronic liver disease and liver cancer. Administering this vaccine is a standard precaution to protect individuals who might encounter potential bloodborne pathogens in their work environment. The other vaccines listed, while important in different contexts, do not provide protection against the specific risks associated with exposure to blood or body fluids. For example, the flu vaccine protects against seasonal influenza, MMR relates to measles, mumps, and rubella, and the tetanus vaccine is primarily aimed at preventing tetanus infection through wound contamination. Thus, the Hepatitis B vaccine is the specific vaccine recommended for those at risk of exposure to blood and body fluids.

**5. What role does Sodium Citrate serve in laboratory testing?**

- A. Anticoagulant in lavender top tubes**
- B. Anticoagulant in blue top tubes**
- C. Preservative for urine samples**
- D. Culture medium for bacterial growth**

Sodium Citrate primarily serves as an anticoagulant in laboratory testing, specifically in blue top tubes. It works by binding calcium ions in the blood, which are essential for the coagulation cascade; by doing so, it prevents blood from clotting. This allows for accurate determination of coagulation factors, making sodium citrate particularly important in tests such as prothrombin time (PT) and activated partial thromboplastin time (aPTT), which evaluate the blood's ability to clot properly. While other options mention different functions related to laboratory testing, sodium citrate is distinctively recognized for its role in blue top tubes used for coagulation studies. Lavender top tubes, for example, usually contain EDTA as the anticoagulant, and preservatives for urine samples are typically other substances like boric acid. Culture media are designed specifically for promoting bacterial growth, which does not relate to the anticoagulation properties of sodium citrate.

**6. What is the main purpose of the lymphatic system?**

- A. to transport oxygen**
- B. to help with digestion**
- C. to restore fluid balance in the body**
- D. to produce hormones**

The main purpose of the lymphatic system is to restore fluid balance in the body. This system plays a crucial role in maintaining homeostasis by collecting excess interstitial fluid that accumulates in tissues and returning it to the bloodstream. This function is vital for preventing edema and ensuring that tissues remain properly hydrated. Additionally, the lymphatic system helps transport white blood cells, which are essential for immune responses, and assists in the absorption and transportation of fats and fat-soluble vitamins from the digestive system. While transporting oxygen primarily involves the circulatory system and is not a function of the lymphatic system, aiding in digestion is more related to the gastrointestinal system. Hormone production is primarily a function of the endocrine system, not the lymphatic system. Understanding the lymphatic system's role highlights its importance in fluid balance and immune function within the body.

**7. What is a characteristic of tests classified as waived?**

- A. They require a high level of expertise**
- B. They must be performed in a clinical setting**
- C. They are simple enough for non-laboratory personnel to conduct**
- D. They require extensive validation and verification**

Waived tests are characterized by their simplicity and ease of use, allowing non-laboratory personnel to perform them effectively without the need for extensive training or specialized skills. This categorization is intended to make certain diagnostic procedures more accessible, particularly in settings where laboratory resources may be limited, such as in doctor's offices or clinics. The simplicity of waived tests contributes to their widespread use, enabling rapid screening and preliminary diagnostics, which can be crucial for patient care. Tests classified as waived typically include procedures like rapid glucose tests, pregnancy tests, and certain types of infectious disease tests, all designed to yield reliable results while minimizing the risk of error due to operator inexperience. The other characteristics mentioned, such as requiring high levels of expertise, mandatory clinical settings, or extensive validation, do not apply to waived tests, as they are specifically designed to be user-friendly for a broad range of personnel.

**8. How does EDTA function as an anticoagulant?**

- A. By preventing platelet aggregation**
- B. By binding to sodium**
- C. By binding calcium**
- D. By lowering blood viscosity**

EDTA, or ethylenediaminetetraacetic acid, functions as an anticoagulant by binding calcium ions in the blood. Calcium is an essential element in the coagulation cascade, a series of complex steps that lead to the formation of blood clots. By chelating or binding the calcium, EDTA effectively disrupts this process, preventing clot formation and allowing for the collection of blood samples in a liquid state for laboratory analysis. This property makes EDTA a valuable anticoagulant, particularly in hematology, where it is commonly used for complete blood counts and other blood tests. Other options are not primarily how EDTA works. For instance, while preventing platelet aggregation is important in some aspects of blood coagulation, EDTA's main action is through calcium chelation. The binding to sodium is not a mechanism through which EDTA acts, as its primary role is in calcium binding. Lowering blood viscosity is not a function of EDTA; rather, it focuses on preventing clotting. Thus, the correct understanding of EDTA's mechanism lies in its ability to bind calcium.

**9. What is an appropriate way to address an elderly patient?**

- A. By their first name only
- B. Using informal titles
- C. By calling them Miss, Mrs., or Mr.**
- D. Using their full name

Addressing an elderly patient with titles such as Miss, Mrs., or Mr. is appropriate because it conveys respect and acknowledges their status and experiences. This formality is particularly significant in healthcare settings, where building rapport and trust is essential for effective communication. Using titles shows consideration for the patient's identity and honors their age, which is important in many cultures where respect for elders is deeply ingrained. This approach fosters a sense of dignity and can make the patient feel valued and cared for in a clinical environment. Calling patients by their first name only or using informal titles may come off as too casual, potentially undermining the professional relationship and making the patient feel less respected. While using a full name can be respectful, it may not carry the same sense of personal recognition or respect that titles do in this context.

**10. If blood does not appear in an evacuated tube during venipuncture, what should a phlebotomist do first?**

- A. Call for assistance
- B. Replace the needle
- C. Slightly reposition the needle**
- D. Try a different vein

When blood does not appear in an evacuated tube during venipuncture, the first step the phlebotomist should take is to slightly reposition the needle. This technique allows for the possibility that the needle might not be in the correct position within the vein. Proper needle placement is key to successful blood collection, and minor adjustments can enable the phlebotomist to access the vein appropriately without unnecessarily switching to a different site or vein. Making a slight adjustment can involve carefully moving the needle within the same puncture site to find the optimal position in the lumen of the vein. This approach often resolves the issue quickly and efficiently without the need to introduce additional discomfort to the patient by re-puncturing or calling for assistance immediately. It is essential to be cautious and gentle to avoid damaging the vein or surrounding tissues. Other options like calling for assistance may delay the process unnecessarily, and trying a different vein or replacing the needle can lead to additional discomfort for the patient and is typically considered only after attempting minor adjustments at the original site.