

PTCB Compounded Sterile Preparation Technician (CSPT) Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

Copyright © 2025 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain from reliable sources accurate, complete, and timely information about this product.

SAMPLE

Questions

SAMPLE

- 1. What is the rule of thumb regarding syringe sizing for compound preparations?**
 - A. Always use the largest syringe available**
 - B. Use the smallest syringe that holds more than the dosage amount**
 - C. Use a medium-sized syringe for most dosages**
 - D. Use varying sizes based on the solution**
- 2. Which type of incompatibility could potentially lead to therapeutic failure?**
 - A. Chemical incompatibility**
 - B. Physical incompatibility**
 - C. Therapeutic incompatibility**
 - D. Allergic reactions**
- 3. What does 'excessive bacterial endotoxins' in compounded preparations indicate?**
 - A. Improper sterilization**
 - B. Optimal formulation**
 - C. Safe usage**
 - D. Good manufacturing practices**
- 4. Which IV fluid is defined as a Large Volume Parenteral (LVP)?**
 - A. A fluid of less than 250 mL**
 - B. A fluid that does not contain drugs**
 - C. A fluid of more than 250 mL**
 - D. A fluid meant for immediate administration only**
- 5. How often should hazardous medication personnel training be refreshed?**
 - A. Every 6 months**
 - B. Every 12 months**
 - C. Every 18 months**
 - D. Every 2 years**

- 6. Which classification is NOT part of the risk level classification?**
- A. Low Risk**
 - B. Medium Risk**
 - C. High Risk**
 - D. Extra High Risk**
- 7. Which medication is not compatible with normal saline (NS)?**
- A. Daptomycin**
 - B. Amphocetrin B**
 - C. Heparin**
 - D. Chemotherapy agents**
- 8. Which of the following best describes a Class II BSC type B2?**
- A. It recirculates air within the cabinet**
 - B. It has a direct connection to the exhaust system**
 - C. It is designed exclusively for non-hazardous drugs**
 - D. It requires no external venting**
- 9. How is Body Surface Area (BSA) calculated?**
- A. Height in cm divided by weight in kg**
 - B. Weight in kg divided by height in cm**
 - C. Square root of height in cm times weight in kg over 3600**
 - D. Height in meters plus weight in kilograms**
- 10. For which purpose are viscous solutions difficult to dispense using a standard syringe?**
- A. Low viscosity**
 - B. High viscosity**
 - C. Temperature regulation**
 - D. Concentration of the solution**

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. What is the rule of thumb regarding syringe sizing for compound preparations?
 - A. Always use the largest syringe available
 - B. Use the smallest syringe that holds more than the dosage amount**
 - C. Use a medium-sized syringe for most dosages
 - D. Use varying sizes based on the solution

The correct approach for syringe sizing in compounded sterile preparations is to use the smallest syringe that holds more than the dosage amount. This principle ensures both precision and accuracy in measurement, which are critical for patient safety and effective compounding. When a smaller syringe is utilized, it allows for a more controlled and accurate dispensing of the medication, reducing the likelihood of dosing errors. Using a larger syringe may lead to less precision when measuring smaller volumes, as the markings may be too spread out to provide an accurate reading. Conversely, selecting a syringe that is exactly the size of the dosage could lead to difficulties in drawing up the medication, especially if there is any residual liquid left in the vial or if air bubbles are introduced. In practice, this rule of thumb promotes efficiency in preparing compounded medications by optimizing the use of equipment and reducing waste, while also aligning with best practices for sterile compounding.

2. Which type of incompatibility could potentially lead to therapeutic failure?
 - A. Chemical incompatibility
 - B. Physical incompatibility
 - C. Therapeutic incompatibility**
 - D. Allergic reactions

Therapeutic incompatibility directly relates to the effectiveness of a medication when combined with other drugs. This type of incompatibility occurs when the combination of medications results in diminished therapeutic effects or unexpectedly increased side effects, leading to a potential failure in achieving the desired health outcome for the patient. In this context, therapeutic incompatibility is particularly significant because it addresses the clinical impact on patient care and treatment efficacy. When two or more medications are incompatible in a therapeutic sense, it can interfere with the intended action of either drug, leading to suboptimal treatment results. While chemical incompatibility refers to reactions at a molecular level that can alter the chemical structure of a drug, and physical incompatibility pertains to changes in the physical state that may affect solubility or appearance, these do not necessarily guarantee that therapeutic failures will occur. Allergic reactions, while critical to acknowledge, are more about the patient's immune response than about the effectiveness of the drug therapy itself. Thus, therapeutic incompatibility is solely focused on the outcome of drug efficacy, highlighting the importance of recognizing such incompatibilities in compounding sterile preparations.

3. What does 'excessive bacterial endotoxins' in compounded preparations indicate?

- A. Improper sterilization**
- B. Optimal formulation**
- C. Safe usage**
- D. Good manufacturing practices**

Excessive bacterial endotoxins in compounded preparations indicate improper sterilization. Endotoxins are toxic compounds found in the outer membrane of certain bacteria and can pose significant risks to patients, leading to severe reactions such as fever, shock, or even death if they enter the bloodstream. When compounded sterile preparations contain excessive levels of endotoxins, it suggests that the sterilization process was inadequate, failing to eliminate or properly control bacterial contamination. This is a critical concern in sterile compounding, where maintaining a sterile environment is essential to ensure patient safety. Proper measures, including adhering to stringent sterilization methods and good manufacturing practices, are necessary to prevent endotoxin contamination. Safe usage and optimal formulation rely on the assurance that compounded products are free from harmful levels of endotoxins, which underscores the importance of proper sterilization techniques in the preparation of sterile medications.

4. Which IV fluid is defined as a Large Volume Parenteral (LVP)?

- A. A fluid of less than 250 mL**
- B. A fluid that does not contain drugs**
- C. A fluid of more than 250 mL**
- D. A fluid meant for immediate administration only**

A fluid is classified as a Large Volume Parenteral (LVP) when it exceeds 250 mL in volume. This classification is significant because LVPs are typically used for intravenous administration of fluids, electrolytes, and nutrients, often over an extended period. They are crucial in clinical settings for hydration, nutrition, and medication delivery, especially in patients who cannot take fluids orally. By exceeding the 250 mL threshold, LVPs facilitate continuous infusion, allowing for a steady and sustained therapeutic effect. This contrasts with smaller volume parenterals, which may be intended for bolus administration or other specific uses. Understanding the distinction in volumes allows healthcare providers to select appropriate fluids based on patient needs, treatment protocols, and the intended duration of therapy.

5. How often should hazardous medication personnel training be refreshed?

- A. Every 6 months
- B. Every 12 months**
- C. Every 18 months
- D. Every 2 years

Hazardous medication personnel training should be refreshed every 12 months to ensure that all staff members are up to date on the latest safety protocols, guidelines, and practices necessary for handling hazardous drugs. This annual refresher training is crucial because it reinforces knowledge about the risks associated with hazardous medications, how to properly handle and dispose of them, and the importance of using personal protective equipment (PPE). Regular training helps maintain a culture of safety within the workplace, which is essential for protecting both healthcare workers and patients from potential exposure and harm. Keeping training current helps address any updates in regulations or advancements in technology that may impact the handling of hazardous medications.

6. Which classification is NOT part of the risk level classification?

- A. Low Risk
- B. Medium Risk
- C. High Risk
- D. Extra High Risk**

The classification that is NOT part of the risk level classification is accurately identified as "Extra High Risk." The established risk levels are designed to assess the likelihood of contamination during the compounding process, primarily categorized into low, medium, and high-risk levels. Low risk involves minimal manipulation and uses sterile products. Medium risk includes compounding that involves multiple ingredients or complex procedures, where the sterility is still maintained effectively. High risk, on the other hand, typically involves non-sterile ingredients or compounding in less controlled environments, which increases the potential for contamination. The term "Extra High Risk" does not exist in the standard risk classification framework for compounded sterile preparations. Therefore, this option is the correct choice as it indicates an incorrect or non-standard classification in the context of sterile compounding. Understanding these classifications is key for ensuring proper protocols, quality assurance, and patient safety in pharmacy practice.

7. Which medication is not compatible with normal saline (NS)?

- A. Daptomycin**
- B. Amphotericin B**
- C. Heparin**
- D. Chemotherapy agents**

Amphotericin B is known to have compatibility issues with normal saline (NS) due to its lipid composition and solubility characteristics. Amphotericin B can precipitate out of solution when mixed with normal saline, leading to a cloudy appearance and potential ineffectiveness of the drug. This incompatibility can also increase the risk of adverse effects if the precipitate is administered to a patient. In contrast, the other choices listed have different compatibility profiles. Daptomycin, Heparin, and various chemotherapy agents can often be mixed with normal saline under certain conditions, although individual drug compatibility can depend on specific formulations and circumstances. Therefore, Amphotericin B stands out as the medication that is not compatible with normal saline, highlighting the importance of understanding the stability and compatibility of medications in sterile compounding.

8. Which of the following best describes a Class II BSC type B2?

- A. It recirculates air within the cabinet**
- B. It has a direct connection to the exhaust system**
- C. It is designed exclusively for non-hazardous drugs**
- D. It requires no external venting**

A Class II Biological Safety Cabinet (BSC) type B2 is specifically designed to provide protection for both the operator and the environment while handling hazardous materials. This cabinet type has a direct connection to the exhaust system, ensuring that all air that is exhausted from the cabinet is safely vented outside the laboratory. The design of a B2 cabinet eliminates the recirculation of air within the cabinet, which is critical for preventing contamination, especially when working with hazardous substances. By venting air directly to the outside, the B2 cabinet effectively reduces the risks associated with the potential release of hazardous agents, thereby enhancing safety for both the technician and the surrounding environment. In contrast to other types, such as those designed exclusively for non-hazardous drugs, the B2 is built with rigorous safety standards to manage the risks associated with handling cytotoxic or other hazardous drugs. Additionally, while some BSCs may not require external venting, the B2's engineering specifically necessitates this feature to ensure appropriate airflow and filtration, reinforcing the importance of external venting in its operational design.

9. How is Body Surface Area (BSA) calculated?

- A. Height in cm divided by weight in kg
- B. Weight in kg divided by height in cm
- C. Square root of height in cm times weight in kg over 3600**
- D. Height in meters plus weight in kilograms

Body Surface Area (BSA) is a critical measurement used in various medical settings, particularly for dosing certain medications and chemotherapy agents, as it provides a more accurate gauge than weight or height alone in determining the appropriate dosage for a patient. The method for calculating BSA involves taking the square root of the product of height in centimeters and weight in kilograms, divided by 3600. This formula ensures that the resulting surface area is calculated in square meters, which is the standard unit for BSA. The use of the square root helps normalize the effect of height and weight, making the calculation more representative of the individual's total body surface area, which correlates with metabolic mass. This choice highlights the importance of both weight and height in the context of understanding a patient's overall size and how it relates to physiological processes. In clinical practice, employing this calculation allows healthcare professionals to make informed decisions regarding drug dosing, fluid administration, and other treatments that depend on an individual's surface area rather than just weight. The other methods provided do not accurately depict the scientifically accepted calculation for BSA. For example, simply dividing weight by height does not account for the two-dimensional relationship that BSA represents. Similarly, adding height and weight does not produce a meaningful metric for surface

10. For which purpose are viscous solutions difficult to dispense using a standard syringe?

- A. Low viscosity
- B. High viscosity**
- C. Temperature regulation
- D. Concentration of the solution

Viscous solutions are characterized by their high resistance to flow, which is a result of their high viscosity. This property makes them difficult to dispense using a standard syringe, as the plunger may require significantly more force to push the thick solution through the narrow opening of the syringe, leading to challenges in accurately measuring and delivering the desired dose. When dealing with solutions that have low viscosity, they flow easily and can be dispensed with minimal effort, making them ideal candidates for use with standard syringes. Temperature regulation does play a role in viscosity; for instance, warming a viscous solution can decrease its viscosity, making dispensing easier, but this does not change the inherent difficulty that arises with high-viscosity solutions. Concentration of the solution can affect its viscosity, but it is not the primary concern when it comes to the dispenser's ability to handle the solution effectively. Therefore, the challenge associated with dispensing is directly linked to the high viscosity of the solution itself.