

## **Low- and Medium-Risk Sterile Compounding Quiz (Set B)**

1. A 5 micron filter needle should be used when withdrawing solution from a(n)
  - a. vial
  - b. PVC bag
  - c. ampule
  - d. glass bottle
  
2. Personnel cleansing and gowning must be done in the following order:
  - a. shoe covers, hair cover, face mask, cleansing, gown, gloves
  - b. hair cover, face mask, shoe covers, cleansing, gown, gloves
  - c. cleansing, gown, hair cover, face mask, shoe covers, gloves
  - d. face mask, hair cover, shoe covers, gloves,cleansing, gown
  
3. The expiration date of opened multi-dose vials should not exceed
  - a. 24 hours
  - b. 28 days
  - c. 1 week
  - d. 30 days
  
4. A laminar airflow workbench should
  - a. operate continuously 24 hours per day.
  - b. not be turned off until the end of each day.
  - c. be turned off between shifts for proper cleaning.
  - d. be turned off when not in use to conserve the HEPA filter.
  
5. Once inside the buffer area and prior to donning sterile powder-free gloves, antiseptic hand-cleansing shall be performed using
  - a. Dakin's solution
  - b. a hydrogen peroxide based gel
  - c. a waterless alcohol-based surgical hand scrub
  - d. a chlorhexidene scrub
  
6. Select the syringe that is the most accurate for measuring a 3.1 ml amount of solution:
  - a. 20 ml syringe
  - b. 10 ml syringe
  - c. 5 ml syringe
  - d. 3 ml syringe

7. To maintain the sterility of a syringe, two parts cannot be touched:
  - a. the tip and the barrel
  - b. the plunger and the barrel
  - c. the tip and the plunger
  - d. none of the above
  
8. The rubber stopper on a vial may be sterilized by
  - a. spraying the top of the vial with isopropyl alcohol and allowing it to dry
  - b. before needle entry.
  - c. spraying the top of the vial with isopropyl alcohol and do the needle entry before the alcohol dries.
  - d. swabbing the top of the vial once with an unused sterile alcohol swab
  - e. swabbing the top of the vial with several firm strokes in the same direction using a clean unused portion of an alcohol swab on each pass
  
9. Before compounding sterile preparations, all vials, ampules, and IV solution containers should be inspected for
  - a. cloudiness
  - b. particulate matter
  - c. expiration date
  - d. all of the above
  
10. The interior working surfaces of the laminar airflow workbench should be cleaned with sterile 70% isopropyl alcohol and
  - a. clean, lint-free non-shedding cloth
  - b. clean, unused paper towel
  - c. sterile gauze pad
  - d. sterile sponge
  
11. A critical area within the ISO Class 5 primary engineering control where critical sites are exposed to unidirectional HEPA-filtered air is called the
  - a. buffer area.
  - b. direct compounding area.
  - c. pre-filter
  - d. controlled area
  
12. The most common means of contaminating a compounded sterile preparation is
  - a. coring the rubber stopper
  - b. human touch
  - c. lint from the alcohol swab
  - d. using a needle more than one time

13. Before sterile compounding begins, the compounder should vigorously scrub the hands, nails, wrists, and forearms for at least 30 seconds with
  - a. 70% isopropyl alcohol
  - b. povidone-iodine
  - c. brush, warm water, and soap
  - d. warm water and soap
  
14. To prevent coring of a rubber stopper in vials, the compounder should insert the needle
  - a. with the bevel tip and then applying lateral and downward pressure
  - b. with the bevel tip and then applying vertical and downward pressure
  - c. with the bevel tip and then applying downward pressure with the bevel side facing the stopper
  - d. with the bevel tip and then applying downward pressure while twisting the needle
  
15. The overwrap of a sterile syringe should
  - a. be removed prior to placing the syringe in the LAFW
  - b. be wiped down with 70% IPA before placing in on the floor of the LAFW
  - c. be opened in the LAFW
  - d. be made of plastic only to maintain sterility
  
16. Once a sterile preparation has been compounded, it should be
  - a. properly labeled
  - b. inspected for cores and particulates
  - c. checked by a pharmacist to verify that the compounder has added the correct drug and amount
  - d. all of the above
  
17. To withdraw fluid from a vial, the volume of fluid should
  - a. always be replaced with an equal volume of air
  - b. be replaced with an equal volume of air except with hazardous drugs or gas-producing drugs
  - c. never be replaced with an equal volume of air
  - d. be replaced with an equal volume of air with hazardous drugs only
  
18. If the final sterile preparation is in a syringe, the needle should
  - a. be removed and replaced with a clean, unused needle
  - b. be removed and capped with a sterile tip or cap
  - c. remain on the syringe and replaced just prior to administration
  - d. remain on the syringe and used for administration

19. Air bubbles may be removed from a syringe by
  - a. pulling air into the syringe, vigorously shaking it, and pushing out the excess air by depressing the plunger
  - b. allowing the syringe to set for a few minutes and then depressing the plunger to push out the excess air
  - c. pulling back the plunger slightly to remove fluid from the needle, tapping the syringe, and then depressing the plunger to push out the excess air
  - d. pulling excess fluid into the syringe and depressing the plunger to push out the excess air and fluid into the LAFW
  
20. Prior to removal of a sterile admixture in a glass container from the LAFW,
  - a. a protective seal should be placed over the stopper
  - b. the stopper should be swabbed with 70% isopropyl alcohol and allowed to dry
  - c. the container should be overwrapped in a sterile plastic bag
  - d. none of the above
  
21. An opened single-dose ampul may
  - a. not be stored over 1 hour after opening.
  - b. not be stored over 6 hours after opening.
  - c. not be stored for any time period.
  - d. not be stored over 24 hours after opening.
  
22. CAIs and CACIs may be located in less than ISO Class 7 air quality if certain conditions are met.
  - a. True
  - b. False
  
23. Air sampling shall be performed at least \_\_\_\_\_ as part of the re-certification of the facilities and equipment.
  - a. weekly
  - b. monthly
  - c. semi-annually
  - d. annually
  
24. Work surfaces in the LAFWs, BSCs, and CAIs shall be cleaned and disinfected every \_\_\_\_\_ minutes during continuous compounding periods of individual CSPs.
  - a. 15
  - b. 30
  - c. 60
  - d. 120

25. Media-fill testing of aseptic work skills shall be performed at least \_\_\_\_\_ for low- and medium-risk compounding.
- a. weekly
  - b. monthly
  - c. semi-annually
  - d. annually