Phlebotomy Practice Questions Workbook

Technician Exam Prep: Order of Draw, Tubes, Safety and Specimen Handling

Published by ClearDose Learning

For educational practice only. Not medical advice. Not affiliated with any certifying body.

This workbook is for educational practice. Use public references listed in the bibliography pages when verifying answers.

© 2026 ClearDose Learning

Diagnostic check

Answer without looking at the key.

1. A phlebotomist's hands are not visibly soiled but have been in contact with a patient's intact skin. Which hand hygiene action is appropriate?

- **A.** Use an alcohol-based hand rub and allow it to dry completely
- **B.** Rinse hands briefly with water only
- **C.** Wipe hands with a dry paper towel
- **D.** Skip hand hygiene because the skin was intact

2. Which antecubital vein is most commonly selected for routine venipuncture because it is large, well anchored, and least likely to roll?

- **A.** Cephalic vein
- **B.** Basilic vein
- **C.** Median cubital vein
- **D.** Radial artery

3. A phlebotomist needs to collect a blood culture, a light blue citrate tube, and a lavender EDTA tube during one venipuncture. Which order should be used?

- **A.** Light blue citrate, blood culture, lavender EDTA
- **B.** Lavender EDTA, blood culture, light blue citrate
- **C.** Blood culture, lavender EDTA, light blue citrate
- **D.** Blood culture, light blue citrate, lavender EDTA

4. A light blue citrate tube is only partially filled because the vein collapsed. What is the most likely effect on the coagulation test results?

- **A.** The specimen will clot faster and must be discarded.
- **B.** The additive-to-blood ratio will be too high, so results may be inaccurate.
- **C.** The tube will overfill from backflow and be acceptable.
- **D.** The heparin in the tube will neutralize the citrate.

5. A phlebotomist is about to perform a venipuncture and applies the tourniquet. How long should the tourniquet generally remain in place before the needle is inserted?

- **A.** No more than about 1 minute
- **B.** At least 5 minutes to allow the vein to fill fully
- **C.** Exactly 3 minutes for all patients
- **D.** As long as needed until blood flow begins

© 2026 ClearDose Learning

Specimen handling & ID

212. A phlebotomist is mixing a tube that contains an anticoagulant. Which handling error is most likely to damage the specimen?

- **A.** Shaking the tube forcefully against a hard surface
- **B.** Inverting the tube gently the recommended number of times
- **C.** Mixing the tube immediately after it is filled
- **D.** Keeping the tube upright between gentle inversions

213. A phlebotomist has drawn blood and is preparing to place the label. Which practice best supports accurate specimen identification?

- **A.** Write the patient's name on the label from memory after returning to the lab
- **B.** Apply the label before the draw and fill in details afterward
- **C.** Apply the label with the patient's full identifiers after confirming identity at the bedside
- **D.** Use a label for a different patient if the correct one is unavailable

214. A specimen has a short stability window after collection. Which action best supports accurate testing?

- **A.** Hold the specimen at room temperature until the next shift
- **B.** Deliver the specimen to the laboratory promptly as specified for that test
- **C.** Delay transport until several other specimens are collected
- **D.** Freeze the specimen immediately regardless of the test requirements

215. A tube with an anticoagulant additive has just been filled. Which technique best preserves the sample for analysis?

- **A.** Shake the tube vigorously for 30 seconds to mix the additive.
- **B.** Let the tube sit upright without any mixing to avoid cell damage.
- **C.** Roll the tube between the palms until the blood looks uniform.
- **D.** Invert the tube gently several times as specified by the manufacturer.

216. While still at the patient's side, a phlebotomist is ready to apply labels to the collected tubes. Which approach best supports accurate specimen identification?

- **A.** Label the tubes later at the desk using the draw list.
- **B.** Write the patient's room number on the tube as the identifier.
- **C.** Apply the label at the bedside after confirming the patient's identity.
- **D.** Ask a coworker to label the tubes from memory after the draw.

© 2026 ClearDose Learning

Answer key (continued)

141. A phlebotomist has a tube with a green stopper and needs to know what additive it likely contains. Which additive is commonly associated with green-stopper tubes?

Correct: C — Sodium heparin

Why correct: Green-stopper tubes commonly contain heparin, an anticoagulant used for plasma testing.
Why A is wrong: Sodium citrate is typically in light blue-stopper tubes.
Why B is wrong: Silica clot activator is used in serum tubes, not typically green-stopper tubes.
Why D is wrong: Potassium EDTA is typically in lavender-stopper tubes.
Source: FDA-TUBE — FDA tube additive information associates green stoppers with heparin.

142. A phlebotomist is selecting a tube for a serum chemistry panel and wants a tube that contains a clot activator and a separation gel. Which stopper color is most appropriate?

Correct: B — Gold or tiger-top

Why correct: Gold or tiger-top serum separator tubes (SSTs) contain a clot activator and a gel barrier to separate serum from cells.
Why A is wrong: Lavender tubes contain EDTA and yield plasma, not serum.
Why C is wrong: Light blue tubes contain sodium citrate and are used for coagulation testing, not serum chemistry.
Why D is wrong: Gray tubes typically contain fluoride and/or oxalate and yield plasma, not serum.
Source: FDA-TUBE — FDA tube/additive information identifies serum separator tubes with clot activator and gel.

143. A phlebotomist is reviewing the purpose of the gel in a serum separator tube. What is the primary function of this gel?

Correct: A — It forms a barrier between serum and cells during centrifugation

Why correct: The gel in an SST forms a physical barrier between the serum and the cellular components after centrifugation.
Why B is wrong: Clot activation is provided by the clot activator, not the gel.
Why C is wrong: Calcium chelation is a function of EDTA, not the separator gel.
Why D is wrong: Glycolysis inhibition is a function of fluoride, not the gel.
Source: FDA-TUBE — FDA tube descriptions explain that separator gels create a barrier between serum/plasma and cells.

144. A phlebotomist needs a plasma specimen for a stat chemistry test and is told to use a tube containing sodium heparin. Which stopper color is commonly associated with this additive?

Correct: D — Green

Why correct: Green-stopper tubes commonly contain sodium or lithium heparin and yield plasma.
Why A is wrong: Lavender tubes contain EDTA.
Why B is wrong: Light blue tubes contain sodium citrate.
Why C is wrong: Red tubes are typically plain serum tubes without anticoagulant.
Source: FDA-TUBE — FDA tube/additive references associate green stoppers with heparin anticoagulants.

© 2026 ClearDose Learning

Answer key (continued)

341. A phlebotomist is choosing between the median cubital and basilic veins in the antecubital area. Which consideration best supports choosing the median cubital vein first?

Correct: B — It is farther from the brachial artery and nearby nerves than the basilic vein.

Why correct: The median cubital vein is generally preferred because it is well supported and located farther from the brachial artery and major nerves than the more medial basilic vein, reducing the risk of complications.

Why A is wrong: The median cubital vein is not always deeper; depth varies, and the basilic vein can also be deep or movable.

Why C is wrong: The median cubital vein is a vein and carries venous blood, not arterial blood.

Why D is wrong: The median cubital vein is in the antecubital fossa, not on the dorsal hand.

Source: WHO-2010 — WHO guidance on venipuncture site selection notes preferred antecubital veins and avoidance of areas near arteries and nerves.

---

342. A phlebotomist is collecting serum (gold), heparin (green), and EDTA (lavender) tubes from one venipuncture. Which sequence follows the CLSI GP41-aligned order of draw?

Correct: D — Gold, green, lavender

Why correct: The order is serum (gold/red), then heparin (green), then EDTA (lavender), reducing additive carryover between tube types.

Why A is wrong: Heparin before serum is out of sequence and can contaminate the serum tube.

Why B is wrong: EDTA before serum or heparin risks EDTA carryover that can affect chemistry and coagulation results.

Why C is wrong: Heparin before serum and EDTA before serum are both out of sequence.

Source: CLSI-OD — CLSI GP41 lists serum before heparin and EDTA tubes.

---

343. Which tube is intended to provide serum for testing?

Correct: C — Gold serum separator tube

Why correct: A gold serum separator tube contains a clot activator and gel to yield serum after clotting and centrifugation.

Why A is wrong: Citrate tubes yield plasma because citrate anticoagulates the blood.

Why B is wrong: Heparin tubes yield plasma because heparin prevents clotting.

Why D is wrong: EDTA tubes yield plasma because EDTA anticoagulates the blood.

Source: FDA-TUBE — FDA tube additive information identifies serum separator tubes and their intended serum use.

---

344. A phlebotomist is performing a capillary fingerstick and the first drop of blood appears. What is the recommended action regarding the first drop?

Correct: A — Wipe away the first drop, then collect the next drops

Why correct: Wiping away the first drop removes tissue fluid that can dilute the sample; subsequent drops are used for testing.

Why B is wrong: The first drop may contain tissue fluid and is generally not used.

Why C is wrong: The first drop should not be added later; it is wiped away.

Why D is wrong: There is no need to discard the entire collection if the first drop is wiped away.

Source: WHO-2010 — WHO recommends wiping away the first drop in capillary blood collection.

© 2026 ClearDose Learning

Public references

Source IDs used in the answer key.

ID	Title	Org
WHO-2010	WHO guidelines on drawing blood: best practices in phlebotomy	World Health Organization
CDC-BSI	Preventing bloodstream infections / injection safety & standard precautions (CDC)	U.S. Centers for Disease Control and Prevention
OSHA-BBP	Bloodborne Pathogens Standard, 29 CFR 1910.1030	U.S. Occupational Safety and Health Administration
CLSI-OD	Order of draw / tube additive sequence as commonly taught from CLSI GP41 recommendations	Clinical and Laboratory Standards Institute (cited publicly in textbooks & lab SOPs)
CDC-HCW	Hand hygiene in healthcare settings (CDC)	U.S. Centers for Disease Control and Prevention
FDA-TUBE	Blood specimen collection tube additive education (commonly taught clinical lab practice)	Clinical laboratory education / manufacturer IFU pattern

© 2026 ClearDose Learning