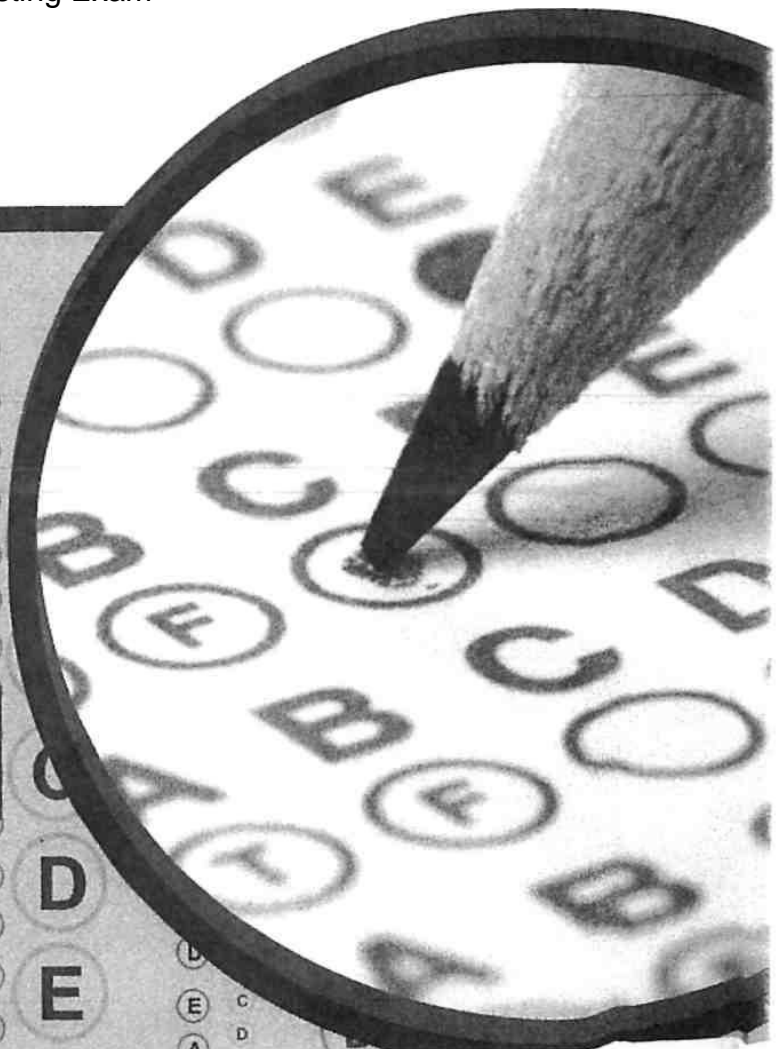


ProductID: NCCTNCPTPO 1

National Certified Phlebotomy Technician Exam Practice Questions

NCCT Practice Tests & Review for the
National Center for Competency Testing Exam

Mometrix
TEST PREPARATION



Practice Test 1

Practice Questions

1. A micro-sample is generally collected from a 9-month old infant by _____.
 - a. finger stick
 - b. scalp stick
 - c. heel stick
 - d. venipuncture
2. For which of the following tests must blood be drawn from an artery?
 - a. Anti-hemophilic factor
 - b. Chromosome analysis
 - c. Hemoglobin A1C
 - d. Blood gases
3. When performing venipuncture on a patient with small, fragile veins, the best solution is to use a:
 - a. winged infusion set with syringe.
 - b. winged infusion set with evacuated tube.
 - c. smaller-sized needle with evacuated tube.
 - d. standard-sized needle with evacuated tube.
4. Which of the following is NOT a cause of hemolysis?
 - a. Failing to air dry antiseptic
 - b. Using a larger-than-needed needle
 - c. Using a smaller-than-needed needle
 - d. Shaking tubes vigorously
5. When collecting a sample of whole blood for testing using a lavender-capped Microtainer®, how many inversions are needed to mix the blood with the additive?
 - a. 6
 - b. 8
 - c. 10
 - d. 12
6. Which of the following factors is likely to have the greatest effect on the results of a CBC processed within 2 hours of collection of the sample?
 - a. Mealtime
 - b. Mild exercise
 - c. Environmental temperature
 - d. Dehydration
7. If the laboratory protocol calls for the use of chlorhexidine solution for skin antisepsis for skin puncture or venipuncture, the antiseptic should NOT be used on infants younger than _____.
 - a. 12 months
 - b. 6 months
 - c. 4 months
 - d. 2 months

8. The maximum length of time a tourniquet should be left in place is _____.
a. one minute
b. two minutes
c. three minutes
d. four minutes
9. If unable to locate an adequate venipuncture site with a tourniquet applied, how long should the tourniquet be released before reapplying?
a. 30 seconds
b. one minute
c. two minutes
d. three minutes
10. When drawing blood from a patient in isolation for infection with *Clostridium difficile*, gloves should be donned _____.
a. after palpating the site
b. before entering the room
c. immediately before preparing the site
d. immediately after preparing the site
11. Which government agency is responsible for laws governing the use of gloves when carrying out a venipuncture?
a. USDA
b. FDA
c. CDC
d. OSHA
12. If a blood specimen is to be obtained for the trough level of a drug, the best time to draw the blood is usually _____.
a. 15 minutes before the next scheduled dose
b. 30 minutes before the next scheduled dose
c. 60 minutes before the next scheduled dose
d. 2 hours after the last scheduled dose
13. The closure cap of the collection tube that contains sodium citrate is _____.
a. gray
b. lavender
c. green
d. light blue
14. If venipuncture is attempted and no blood returns when the evacuated tube is attached but the needle appears to be in the vein, the initial response should be to _____.
a. consider an ankle vein
b. remove the needle
c. reposition the needle
d. change the evacuated tube
15. If a patient had a right mastectomy 6 months ago, blood may be drawn from the _____.
a. left arm
b. left or right ankle
c. right arm – distal area only
d. left or right arm

16. When performing venipuncture on a patient with extensive burns, the phlebotomist should _____.
a. pad the tourniquet area
b. avoid burned areas
c. use a winged infusion set
d. avoid using a tourniquet
17. If a patient is very angry and yells that the lab tests are a “waste of time,” which of the following is the best first response?
a. Stay calm and listen
b. Explain the purpose
c. Leave the room
d. Ask the patient to be civil
18. If an indwelling line, such as a central venous catheter is used to obtain a blood sample, how much blood should be discarded before the sample is collected?
a. One mL
b. Two mL
c. Four mL
d. Five mL
19. The first step in carrying out a venipuncture is to _____.
a. explain the purpose
b. ask permission
c. identify the patient
d. identify the site
20. If, when performing a venipuncture in the antecubital space, the patient grabs the arm and complains of severe, shock-like pain, the initial response should be to _____.
a. complete the blood collection
b. remove the needle and apply pressure
c. reassure the patient
d. remove the needle and apply ice
21. If a patient in the emergency department refuses to have blood drawn but the phlebotomist does so at the physician’s assistance, the phlebotomist may be charged with _____.
a. assault
b. negligence
c. malpractice
d. nothing
22. If, after leaving a patient’s room, the phlebotomist is asked by the patient’s brother what tests the patient is having, the phlebotomist should _____.
a. provide the information
b. provide no information
c. deny having any knowledge
d. ask the patient’s permission to divulge

23. If a very small hematoma is evident during the venipuncture, the best initial response is to _____.
a. remove the needle, elevate the arm, and apply pressure
b. remove the needle and apply an ice compress
c. remove the needle and apply pressure
d. observe and complete the venipuncture
24. After cleansing the skin for a venipuncture, the phlebotomist should NOT _____.
a. allow the antiseptic to air dry
b. cleanse a second time
c. wipe the skin dry
d. choose an alternate site
25. If blood must be drawn from an arm that has an IV in place, the IV should first be clamped for at least _____.
a. one minute
b. two minutes
c. four minutes
d. six minutes
26. Which of the following should NOT be disposed of in a sharps container?
a. Blood-stained gauze
b. Tube holder
c. Lancet
d. Opened clean needle
27. Which veins should NOT be used for venipuncture?
a. Veins on the dorsal side of the hand
b. Veins on the palmar side of the wrist
c. Veins on the dorsal side of the wrist
d. Veins in the forearm
28. The primary difference between plasma and serum is that only plasma contains _____.
a. enzymes
b. nitrogenous waste
c. fibrinogen
d. globulins
29. For which of the following tests must the blood specimen be maintained at body temperature until processing?
a. Cold agglutinins
b. Lactic acid
c. pH
d. Parathyroid hormone
30. The closure cap of the collection tube that has been specifically designed to meet AAMM requirements is _____.
a. lavender
b. yellow
c. pink
d. navy blue

31. For which of the following tests must the blood specimen be immediately chilled?
- Hematocrit
 - Cryofibrinogen
 - Cold agglutinins
 - Lactic acid
32. One of the reasons that serum is more often used for testing than plasma is that serum contains _____.
- more antigens
 - fewer antigens
 - more anticoagulants
 - fewer gases
33. The purpose of a blood transfer device is to prevent _____.
- specimen contamination
 - a needlestick
 - tube breakage
 - spillage
34. The minimal acceptable draw volume for a green-capped collection tube is _____.
- 25%
 - 50%
 - 75%
 - 100%
35. If a gray-capped collection tube is overfilled, the result may be _____.
- no effect
 - low test result
 - high test result
 - clotting of the specimen
36. Wearing artificial nails especially increases the risk of harboring _____.
- fungi
 - viruses
 - Gram-negative bacteria
 - Gram-positive bacteria
37. When collecting blood specimens with collection tubes with lavender, green, and light blue closure tops the correct order of the draw (first to last) is _____.
- green, light blue, and lavender
 - light blue, green, and lavender
 - lavender, green, and light blue
 - lavender, light blue, and green
38. When asked to collect blood from a vascular access device, the phlebotomist should recognize that this procedure _____.
- is outside his or her scope of practice
 - requires supervision
 - requires no additional training
 - is contraindicated

39. The cap color for the collection tube used for tests of therapeutic drug levels is _____.
a. gold
b. green
c. light blue
d. gray
40. The nerve most often injured with venipuncture is the _____.
a. radial
b. ulnar
c. musculocutaneous
d. median
41. For forensic collection of a blood sample, the specimen container must be _____.
a. placed and sealed inside a transfer bag
b. taped shut
c. personally observed during testing
d. placed in a clear plastic bag
42. After birth, RBCs are produced almost exclusively in the _____.
a. spleen
b. liver
c. red bone marrow
d. yellow bone marrow
43. If a phlebotomist is exposed to blood containing HIV, PEP must be started within _____.
a. 72 hours
b. one week
c. 2 weeks
d. 3 weeks
44. In the blood count, a "shift to the left" usually refers to an increased number of immature _____.
a. RBCs
b. lymphocytes
c. monocytes
d. neutrophils
45. RBCs normally circulate in the bloodstream for _____.
a. 60 days
b. 90 days
c. 120 days
d. 150 days
46. Which of the following items generally require only cleaning and NOT disinfection or sterilization?
a. IV pumps
b. Light switches
c. Surgical instruments
d. Bed curtains

47. The most abundant electrolytes in plasma are sodium and _____.
a. chloride
b. potassium
c. calcium
d. magnesium
48. The primary function of WBCs is to _____.
a. oxygenate tissue
b. fight infection
c. facilitate blood clotting
d. inhibit blood clotting
49. What are the normal values for the platelet count?
a. 75,000 to 100,000 mm³
b. 100,000 to 250,000 mm³
c. 150,000 to 450,000 mm³
d. 200,000 to 400,000 mm³
50. When the patient begins the GTT but the FBS is 180 mg/dL, the next step is to _____.
a. notify the physician
b. administer glucose solution
c. administer water to drink
d. discontinue testing
51. An increased eosinophil count often indicates _____.
a. viral infection
b. vascular trauma
c. allergic reaction
d. bacterial infection
52. The most common plasma protein is _____.
a. fibrinogen
b. albumin
c. alpha globulin
d. beta globulin
53. Hemostasis refers to _____.
a. stoppage of bleeding
b. clotting of blood
c. loss of blood
d. concentration of blood
54. If blood cannot be obtained from either arm, before a foot or ankle can be used for drawing blood, the cross-trained phlebotomist should _____.
a. check with a supervisor
b. obtain a physician's order
c. ask the patient's permission
d. review the procedure

55. When collecting samples for a number of tests, the specimen for the blood culture must be collected _____.
a. whenever it is convenient
b. last
c. first
d. after the blue-capped collection tube
56. The primary organization/agency that accredits laboratories and publishes laboratory checklists is _____.
a. CLSI
b. CAP
c. FDA
d. CDC
57. Which of the following tests is included in the hepatic function panel?
a. Albumin
b. Creatine kinase
c. ESR
d. Cryoglobulin
58. What is the purpose of the gel in the plasma separator tube?
a. Providing anticoagulation
b. Preventing contamination
c. Speeding clotting
d. Separating plasma from cells
59. If collecting samples for blood cultures from an adult but only 10 mL can be collected, the correct procedure is to _____.
a. put 10 mL in the anaerobic collection tube
b. put 10 mL in the aerobic collection tube
c. put 5 mL in the aerobic tube and 5 mL in the anaerobic tube
d. put 8 mL in the aerobic tube and 2 mL in the anaerobic tube
60. If a child weighs 34 lb., the maximum volume of blood that can be drawn at one time is _____.
a. 2.5 mL
b. 5 mL
c. 10 mL
d. 20 mL
61. Which of the following tests requires fasting for accuracy?
a. Glucose
b. CBC
c. Electrolytes
d. WBC count
62. To obtain the peak level of an oral drug, a blood sample should usually be drawn _____.
a. 30 to 60 minutes after the dose
b. 1 to 2 hours after the dose
c. 2 to 4 hours after the dose
d. 4 to 6 hours after the dose

63. The first step in transferring blood drawn from a collecting syringe to a collecting tube is to _____.
a. remove the needle and discard
b. apply a blood transfer device
c. attach a collection tube
d. activate the needle safety features
64. When the phlebotomist enters an isolation room to draw blood, the phlebotomy tray should be _____.
a. covered with a sterile drape
b. placed on a table inside the room
c. left outside the room
d. replaced after leaving the room
65. Which of the following positions is usually the best for a toddler who needs a venipuncture?
a. Supine
b. Side-lying
c. Prone with arm extended
d. Hug hold, facing parent
66. The primary reason that a young child may appear more cooperative and cry less during venipuncture when no parent is present is because without a parent, the child is likely _____.
a. more afraid
b. less afraid
c. less attention seeking
d. less spoiled
67. In a hospital environment, infection is most commonly spread by _____.
a. contaminated equipment
b. the ventilation system
c. contaminated hands
d. contaminated food
68. How frequently must medical facilities review the availability of safer medical devices?
a. Monthly
b. Every 6 months
c. Annually
d. Every 2 years
69. The infections most commonly transmitted through needle stick and sharp injuries are _____.
a. HBV, HCV, and HIV
b. HBV, HIV, and HZV
c. HIV, syphilis, and CMV
d. HBV, HB, and HZV
70. If a phlebotomist sustains a needle stick injury, the first step is to _____.
a. notify the supervisor.
b. cleanse the puncture site with alcohol
c. wash the puncture site with soap and water
d. milk the wound to promote bleeding

71. Which of the following laboratory tests often shows decreased values with older adults?
- Hct
 - RBC count
 - WBC count
 - Creatinine clearance
72. When collecting a blood sample with a capillary tube, the phlebotomist should _____.
- allow blood to flow by capillary action
 - milk the puncture site
 - scoop the blood into the tube
 - reapply alcohol to promote blood flow
73. Strenuous exercise may increase values of which of the following tests for more than 24 hours?
- Aldosterone
 - Lactic acid
 - Albumin
 - Lactic dehydrogenase (LD)
74. Which of the following tests requires that the specimen be protected from light?
- Testosterone
 - Vitamin D
 - Creatinine
 - Bilirubin
75. In which order should green capped, lavender-capped, and red-capped pediatric micro-collection containers be collected?
- Green, lavender, and red
 - Lavender, green, and red
 - Red, lavender, and green
 - Lavender, red, and green
76. Which of the following tests are NOT done on whole blood?
- HBV antibody
 - CBC
 - ESR
 - Hgb electrophoresis
77. When conducting a heel stick on an infant, the puncture depth should not exceed _____.
- 1 mm
 - 2 mm
 - 3 mm
 - 4 mm
78. When performing filter paper collection for newborn screening, the phlebotomist should NOT _____.
- air dry the filter paper
 - warm the heel before puncture
 - wipe off the first blood drop
 - apply more blood than fills the circle

79. A FBS that is ordered QID a.c. and h.s. must be done _____.
a. 3 times daily before meals and at bedtime
b. 3 times daily after meals and at bedtime
c. 4 times daily before meals and at bedtime
d. 4 times daily after meals and at bedtime
80. A person with blood type AB+ should receive a transfusion with blood type _____.
a. A+
b. B+
c. AB+
d. A+, B+, or AB+
81. If asked to draw blood from a hospitalized patient who has lost her armband, the first action should be to _____.
a. ask staff to replace the armband
b. ask the patient for two identifiers
c. verify the patient's identification with staff
d. verify the correct room number
82. The innermost layer of an artery is the _____.
a. tunica media
b. tunica externa
c. adventitia
d. endothelium
83. The most commonly used needle gauge for venipuncture is _____.
a. 19
b. 21
c. 23
d. 24
84. If the safety device on the venipuncture needle fails to activate, leaving the needle exposed, in order to dispose of the needle, the phlebotomist should _____.
a. place the cap back on the needle
b. bend and break the needle
c. wrap a gauze pad around the needle
d. carefully place the needle in the sharps container
85. Substances in the blood are exchanged for those in the tissues _____.
a. veins
b. arteries
c. capillaries
d. venules
86. Which characteristic differentiates a vein from an artery?
a. Thicker walls
b. valves
c. Narrower lumens
d. Greater elasticity

87. Which of the following tests is NOT part of enzyme studies for a heart attack?
- a. Myoglobin
 - b. Troponin
 - c. CK-BB
 - d. CK-MB
88. If an elderly patient has rolling veins, which of the following is the best solution?
- a. Apply a tourniquet immediately above the venipuncture site
 - b. Use a winged infusion set with syringe
 - c. Use a winged infusion set with evacuated tube
 - d. Anchor the vein with the thumb
89. The initial screening test for thyroid dysfunction is usually _____.
- a. TSH
 - b. T3
 - c. T4
 - d. Anti-TPO
90. If the phlebotomist has made two unsuccessful attempts to draw blood from a patient, the next step should be to _____.
- a. reassure the patient
 - b. wait 5 minutes
 - c. call for another phlebotomist
 - d. notify the MD
91. When drawing blood from a patient with moderate to advanced dementia, it is most important to _____.
- a. use minimal supplies
 - b. explain the procedure
 - c. work quickly
 - d. ask for assistance
92. Standard precautions must be used with _____.
- a. all patients
 - b. patients with infections
 - c. immunocompromised patients
 - d. hospitalized patients
93. When performing a venipuncture on a patient under investigation (PUI) for Ebola, the correct isolation procedure is _____.
- a. contact
 - b. droplet
 - c. contact and droplet
 - d. standard, contact, and droplet plus enhanced measures
94. If drawing blood from an unconscious patient, the phlebotomist should assume the patient _____.
- a. will remain immobile
 - b. cannot hear
 - c. can comprehend what they are saying
 - d. is insensate

95. When doing a finger stick on an adult, it is most appropriate to use the _____.
a. thumb (1st)
b. middle finger (3rd)
c. index finger (2nd)
d. little finger (5th)
96. Which of the following substances that may be present in collection tubes is NOT an anticoagulant?
a. Sodium fluoride
b. Sodium citrate
c. ACD (acid citrate dextrose)
d. Potassium oxalate
97. Which vein is most commonly used for venipuncture?
a. Cephalic
b. Median cubital
c. Basilic
d. Brachial
98. The order of draw is determined by the _____.
a. FDA
b. CAP
c. JCAHO
d. CLSI
99. When doing a blood draw for PT, aPTT, and TT, what is the correct cap color on the collection tube?
a. Green
b. Lavender
c. Light blue
d. Gray
100. When a patient is suspected of having septicemia, what is the minimal recommended number of sets of blood cultures?
a. Two
b. Three
c. Four
d. Five
101. Sharps containers should never be filled more than _____.
a. 50% full
b. 70% full
c. 80% full
d. 100% full
102. Which of the following vaccinations is NOT usually recommended routinely for phlebotomists?
a. HBV
b. MMR
c. Influenza
d. HZV

103. Phlebotomists are especially at risk for developing an allergic response to _____.
a. latex
b. alcohol
c. plastic
d. nitrile
104. If, when arriving to do a venipuncture, the patient states that she has been calling for 20 minutes for a nurse to help her to the bathroom but no one has answered, the best initial response is to
a. get a nurse to assist the patient
b. complete the venipuncture quickly
c. assist the patient to the bathroom
d. return at a later time
105. Blood is pumped from the heart to the aorta and into general circulation from the _____.
a. right atrium
b. right ventricle
c. left atrium
d. left ventricle
106. The artery that is most commonly used for arterial blood sampling is the _____.
a. radial
b. ulnar
c. brachial
d. axillary
107. Which of the following glands is NOT part of the endocrine system?
a. Parathyroid
b. Parotid
c. Pituitary
d. Pancreas
108. Which of the following glands produce insulin?
a. Thymus
b. Parathyroid
c. Pancreas
d. Adrenal
109. With double-pointed needles, the rubber sheath that covers the shorter needle is intended to _____.
a. prevent needlestick injuries
b. prevent leakage of blood
c. indicate the side used for venipuncture
d. prevent breakage of the needle
110. The primary use of non-additive evacuated plastic collection tubes is for _____.
a. practice tubes
b. cultures
c. contaminated samples
d. discard tubes

111. When collecting blood samples in evacuated collection tubes that contain sodium citrate or ACD, the ratio of blood to additive must be _____.
a. 10:1
b. 9:1
c. 8:2
d. 7:3
112. If collecting a blood sample using a syringe, the maximum size of the syringe should be _____.
a. 5 mL
b. 10 mL
c. 20 mL
d. 50 mL
113. The activating safety device on a double-pointed needle is generally activated by _____.
a. pulling backward with the thumb
b. pulling backward with the index finger
c. pushing forward with the thumb
d. pushing forward with the index finger
114. Which type of lancet is most likely indicated to fill multiple Microtainer® tubes?
a. Blade, 2 x 1.5 mm
b. Blade, 1 x 1.5 mm
c. Needle, 28-gauge
d. Needle, 23-gauge
115. The volume of blood that a Microtainer® holds is _____.
a. 0.25 mL
b. 0.5 mL
c. 0.75 mL
d. 1 mL
116. If a physician has withdrawn synovial fluid and wants to send a specimen for Gram stain, culture, and sensitivity, the collection tube should contain _____.
a. sodium heparin
b. EDTA
c. no additive
d. thrombin
117. Which of the following tests is NOT included in the BMP?
a. Glucose
b. Potassium
c. BUN
d. Triglycerides
118. If the phlebotomist is accidentally splashed with a highly toxic hazardous chemical, what is the minimum length of time that the affected body part should be flushed with water?
a. 2 minutes
b. 5 minutes
c. 10 minutes
d. 15 minutes

119. Which of the following anatomical planes divides the body into the anterior and posterior portions?
- Transverse
 - Midsagittal
 - Coronal
 - Parasagittal
120. If a patient continuously rubs her hands together and licks her lips when the phlebotomist is explaining a procedure, the phlebotomist should consider that the patient is likely _____.
- dehydrated
 - nervous
 - angry
 - in pain
121. The thoracic cavity contains the _____.
- esophagus
 - spleen
 - stomach
 - liver
122. The document that outlines a patient's wishes about medical treatment and interventions in end-of-life care is a(n) _____.
- power of attorney
 - do-not-resuscitate directive
 - will and testimony
 - advance directive
123. In a laboratory, the job of the cytotechnologist is to _____.
- prepare samples of body tissues for examination
 - examine body cells to detect and stage cancer
 - perform general laboratory tests
 - examine tissues and interpret laboratory results
124. The primary focus of CLIA (1988) is to ensure that _____.
- patients get correct laboratory results
 - patients are reimbursed for errors
 - patients are informed of rights
 - patients are protected from injury
125. At which of the following times are peak levels of cortisol usually obtained?
- In the late afternoon
 - Around noon
 - In the early morning
 - At midnight
126. The Joint Commission is primarily a(n) _____.
- research facility
 - regulatory agency
 - FDA advisory board
 - accrediting organization

127. If the phlebotomist notes that the cord of a piece of equipment is frayed, the appropriate initial action is to _____.
- a. apply tape to the frayed area
 - b. unplug the equipment
 - c. call for service
 - d. notify a supervisor
128. Which of the following is the appropriate level of isolation for a patient with influenza?
- a. Droplet
 - b. Contact
 - c. Airborne
 - d. Standard
129. If the phlebotomist notes that a previous venipuncture site is tender and erythematous with a red streak extending 4 inches above the site, the likely cause is _____.
- a. allergic response
 - b. hematoma
 - c. ecchymosis
 - d. phlebitis
130. If the phlebotomist notes clots in the whole blood collection tube of a sample for a PT, the phlebotomist should _____.
- a. transport for processing
 - b. discard the tube
 - c. invert the tube 5 times
 - d. ask a supervisor for advice
131. If a patient falls and experiences a fractured hip, the phlebotomist expects the patient will be treated in the _____.
- a. oncology department
 - b. outpatient department
 - c. orthopedic department
 - d. obstetric department
132. If the phlebotomist observes another worker placing needles and syringes into a personal bag before leaving work, the best response is to _____.
- a. confront the worker
 - b. remain quiet
 - c. call the police
 - d. notify the supervisor
133. If the laboratory has gotten new equipment with which the phlebotomist is not familiar, the best solution is to _____.
- a. request training
 - b. refuse to use the equipment
 - c. try to use the equipment
 - d. ask other staff to assist

134. The proper use of a disinfectant is on _____.
a. skin
b. inanimate objects
c. mucous membranes
d. skin and inanimate objects
135. According to CLSI standards, while the phlebotomist is inside the laboratory, the phlebotomist should wear _____.
a. a long-sleeved laboratory coat/gown
b. a clean uniform
c. isolation gear
d. gloves and mask
136. If a patient is chewing gum when the phlebotomist prepares to draw blood for a CBC, the patient should be _____.
a. allowed to continue
b. asked to remove the gum
c. asked to refrain from actively chewing during the procedure
d. asked if the gum is sugar free
137. According to CLSI guidelines, when using a variety of tubes, needles, and holders, the phlebotomist should first ensure that they _____.
a. have the same manufacturer
b. appear compatible
c. are in correct sizes
d. are intact
138. Where should the tourniquet be placed in reference to the venipuncture site?
a. 5 to 10 cm superior
b. 5 to 10 cm inferior
c. 5 to 10 cm posterior
d. 5 to 10 cm anterior
139. If using a BP cuff instead of a tourniquet for venipuncture, the BP cuff should NOT be inflated to more than _____.
a. 20 mm Hg
b. 40 mm Hg
c. 80 mm Hg
d. 100 mm Hg
140. When doing a venipuncture, the correct angle of insertion of the needle is usually _____.
a. 10 degrees
b. 35 degrees
c. 30 degrees
d. 45 degrees
141. After collecting a blood specimen in a collection tube that contains EDTA, the tube should be inverted _____.
a. 3 to 4 times
b. 5 times
c. 8 times
d. 4 times

142. Following a venipuncture in the antecubital area, the arm should remain bandaged for a minimum of _____.
a. 5 minutes
b. 15 minutes
c. 30 minutes
d. 60 minutes
143. Labeling a tube after collection of a blood sample should be done _____.
a. in a patient's presence
b. after leaving the patient's presence
c. after entering the laboratory
d. before placing the tubes for processing
144. In an inpatient facility, PPE for the phlebotomist must be provided by _____.
a. the phlebotomist
b. the employer
c. the FDA
d. OSHA
145. Which of the following tests is most often used to monitor unfractionated heparin?
a. aPTT
b. INR
c. PT
d. TT
146. Black-capped collection tubes are used only for _____.
a. toxicology
b. lead levels
c. coagulation tests
d. ESR
147. In response to bacterial infection, the cell that is most likely to increase in number is the _____.
a. monocyte
b. basophil
c. eosinophil
d. neutrophil
148. If one parent has type B+ blood and the other parent has type AB+, which of the following blood types could their children have?
a. AB+ only
b. A+, AB+, or B+ only
c. AB or B+ only
d. AB+ or A+ only
149. Prior to a GTT, the patient should fast for _____.
a. 2 hours
b. 6 hours
c. 12 hours
d. 24 hours

150. Agglutination of red blood cells results from a reaction between _____.
- a. red and white blood cells
 - b. platelets and coagulation factors
 - c. platelets and antigens
 - d. antigens and antibodies

1. C	51. C	101.C
2. D	52. B	102.D
3. A	53. A	103.A
4. B	54. B	104.A
5. C	55. C	105.D
6. D	56. B	106.A
7. D	57. A	107.B
8. A	58. D	108.C
9. C	59. B	109.B
10. B	60. C	110.D
11. D	61. A	111.B
12. A	62. B	112.B
13. D	63. D	113.C
14. C	64. C	114.A
15. A	65. D	115.C
16. B	66. A	116.A
17. A	67. C	117.D
18. D	68. C	118.D
19. C	69. A	119.C
20. B	70. C	120.B
21. A	71. D	121.A
22. B	72. A	122.D
23. D	73. D	123.B
24. C	74. D	124.A
25. B	75. B	125.C
26. A	76. A	126.D
27. B	77. B	127.B
28. C	78. D	128.A
29. A	79. C	129.D
30. C	80. C	130.B
31. D	81. A	131.C
32. A	82. D	132.D
33. B	83. B	133.A
34. B	84. D	134.B
35. D	85. C	135.A
36. C	86. B	136.B
37. B	87. C	137.A
38. A	88. D	138.A
39. B	89. A	139.B
40. D	90. C	140.C
41. A	91. D	141.C
42. C	92. A	142.B
43. A	93. D	143.A
44. B	94. C	144.B
45. C	95. B	145.A
46. D	96. A	146.D
47. A	97. B	147.D
48. B	98. D	148.C
49. C	99. C	149.C
50. A	100.B	150.D