

Total Question: 300 QAs

1. Transfer of an infectious agent via droplets larger than 5 μm in diameter is known as

- ☐ a. Airborne transmission
- ☒ b. Droplet transmission **Correct**
- ☐ c. Vector transmission
- ☐ d. Vehicle transmission

Droplet transmission involves transfer of an infectious agent via droplets larger than 5 μm in diameter, whereas airborne transmission involves dispersal of infectious evaporated droplet nuclei less than 5 μm in diameter. In vector transmission, infectious agents are carried by insects, arthropods, or animals; in vehicle transmission, infectious agents are transmitted through contaminated food, water, or drugs.

2. Which of the following is an example of vector transmission?

- ☐ a. Tuberculosis
- ☐ b. Salmonella infection
- ☒ c. Bubonic plague **Correct**
- ☐ d. HIV

The transmission of bubonic plague by fleas from rodents is an example of vector transmission; tuberculosis is spread via airborne transmission. Transmission of salmonella infection associated with handling contaminated food and human immunodeficiency virus (HIV) infection through blood transfusion are examples of vehicle transmission.

3. Droplet transmission may result from

- ☐ a. Mosquito bite
- ☐ b. Kissing
- ☐ c. Contaminated food or water
- ☒ d. Throat swab **Correct**

Droplet transmission may result from transfer of infectious agents by coughing, sneezing, or talking or through procedures such as throat swab collection. Vector transmission may result from mosquito or flea bites and vehicle transmission through contaminated food or water; transfer of an infectious agent through kissing or touching is known as direct contact transmission.

4. All of the following are prohibited under Centers for Disease Control (CDC) guidelines for hand hygiene EXCEPT

- ☒ a. Hand washing using plain soap and water **Correct**
- ☐ b. Artificial nails
- ☐ c. Nails longer than one quarter inch
- ☐ d. Touching faucet handles after hand washing

Routine hand washing using plain soap and water is required to prevent spread of infection; alcohol-based antiseptic hand cleaners may also be used. Artificial nails or nails longer than one quarter inch are prohibited. After hand washing, a clean paper towel should be used to turn off the faucet to prevent contamination.

5. Protective isolation may be required for all of the following patients EXCEPT

- ☐ a. Neutropenic chemotherapy patients
- ☐ b. Burn patients
- ☒ c. Infants **Correct**
- ☐ d. AIDS patients

Protective or reverse isolation may be required for patients highly susceptible to infection, such as burn patients, patients with AIDS, or chemotherapy patients with a low neutrophil count; protective isolation is usually not required for infants.

6. Which of the following statements regarding standard precautions for infection control is FALSE?

- ☒ a. Use both hands to recap needles **Correct**
- ☐ b. Hands should be washed before putting on and after removing gloves
- ☐ c. Standard precautions apply to all secretions except sweat
- ☐ d. Resuscitation devices may be used as an alternative to the mouth-to-mouth method

Never use both hands to recap a needle; hands should be washed both before putting on and after removing gloves. Standard precautions should be followed for all body fluids except sweat; resuscitation devices may be used as an alternative to mouth-to-mouth resuscitation.

7. Use of an N95 respirator is NOT required in the case of

- ☐ a. A child with chickenpox
- ☐ b. A child with measles
- ☒ c. An adult immune to measles or chickenpox **Correct**
- ☐ d. An adult who has never had measles or chickenpox

An N95 respirator must be worn by all individuals susceptible to measles or chickenpox before entering the room of a patient known or suspected to have these diseases; however, adults who are immune to measles or chickenpox are not required to wear an N95 respirator or surgical mask.

8. Which of the following is NOT a violation of general laboratory safety rules?

- ☐ a. Wearing a laboratory coat when leaving the lab
- ☐ b. Wearing nail polish
- ☐ c. Wearing large earrings
- ☒ d. Having shoulder-length hair **Correct**

Shoulder-length or longer hair is acceptable in the laboratory if it is tied back; wearing nail polish or large or dangling earrings is not acceptable. A laboratory coat should never be worn when leaving the lab for any reason.

9. Which of the following statements regarding HBV is FALSE?

- ☐ a. HBV vaccine also protects against HDV
- ☐ b. HBV vaccine does not contain live virus
- ☒ c. HBV vaccine may pose a risk of HBV transmission **Correct**
- ☐ d. HBV can survive up to 1 week in dried blood

HBV vaccine does not contain live virus and thus does not carry the risk of HBV infection; HBV vaccine also protects against hepatitis D virus (HDV) because it is only contracted concurrently with HBV. HBV can survive up to 1 week in dried blood on work surfaces or other objects.

10. HCV exposure may occur through

- ☐ a. Urine
- ☒ b. Sexual contact **Correct**
- ☐ c. Semen
- ☐ d. Phlebotomy procedures

Hepatitis C virus (HCV) infection may occur through exposure to blood and serum and is primarily transmitted through sexual contact and needle sharing; however, it is rarely found in urine or semen and is not associated with phlebotomy procedures.

11. To reduce the risk of transmission of a bloodborne pathogen, you should

- ☐ a. Cleanse the wound with bleach
- ☐ b. Cleanse the wound with an antiseptic
- ☒ c. Cleanse the wound with soap and water **Correct**
- ☐ d. Squeeze the wound to release fluid

Cleansing the wound with plain soap and water for at least 30 seconds is useful in reducing the risk of transmission of a bloodborne pathogen; squeezing the wound or cleansing the wound with an antiseptic, bleach, or other caustic agents is not recommended.

12. A specific type of fire extinguisher is used for each of the following classes of fire EXCEPT

- ☐ a. Class K
- ☒ b. Class D **Correct**
- ☐ c. Class C
- ☐ d. Class B

A specific class of fire extinguisher is used for each class of fire except for class D fires; these types of fires involve combustible or reactive metals such as sodium, potassium, magnesium, or lithium and should be handled by trained firefighting personnel.

13. A fire caused by the splashing of hot grease from a frying pan is classified as a

- ☒ a. Class K fire **Correct**
- ☐ b. Class A fire
- ☐ c. Class B fire
- ☐ d. Class D fire

Class K fires are often caused by high-temperature cooking oils, grease, or fats; class A fires occur with wood, paper, or clothing and class B fires with flammable liquids and vapors such as paint or gasoline. Class D fires are associated with combustible or reactive materials such as sodium or potassium.

14. All of the following are acceptable procedures to control wound hemorrhage EXCEPT

- ☐ a. Applying direct pressure to the wound
- ☐ b. Using an elastic bandage to hold the compress
- ☒ c. Removing the original compress when adding additional material **Correct**
- ☐ d. Using cloth or gauze to apply pressure

When adding additional compresses to a wound, the original compress should not be removed to avoid interference with the clotting process; direct pressure should be applied to the wound using cloth or gauze. An elastic bandage can be used to hold the compress in place.

15. Which of the following symbols is NOT included on the Joint Commission "Do Not Use" list?

- ☐ a. IU
- ☒ b. IV **Correct**
- ☐ c. U
- ☐ d. QD

IV is an acceptable acronym; however, IU, or international unit, is often confused with IV and thus should not be used. U should be written out as "unit" and QD as "daily."

16. Which symbol may soon be included in the Joint Commission "Do Not Use" list?

- ☐ a. Minus sign (-)
- ☐ b. Equal sign (=)
- ☐ c. Plus-or-minus sign (\pm)
- ☒ d. Less than sign (<) **Correct**

The symbols for less than (<) and greater than (>) are often confused for the letter "L" and the number 7, respectively, and thus may soon be added to the "Do Not Use" list.

17. A patient lying on their stomach is said to be in the

- ☐ a. Anatomic position
- ☒ b. Prone position **Correct**
- ☐ c. Supine position
- ☐ d. Reclining position

A patient lying on their stomach is in the prone position; a patient lying on their back, face up, is in the supine position. A patient standing erect with arms at their sides and palms facing forward is considered to be in the anatomic position. Reclined position is also referred to as semi-Fowler's position, with the head of the bed at approximately 30 to 45 degrees.

18. Which of the following statements regarding lumbar puncture is FALSE?

- ☐ a. The needle enters the spinal cavity
- ☐ b. The needle enters the space between the 3rd and 4th lumbar vertebrae
- ☒ c. The procedure poses a risk of injury to the spinal cord **Correct**
- ☐ d. The procedure does not present a risk of spinal cord injury

Because the spinal cord ends at the first lumbar vertebra, lumbar puncture does not present a risk of spinal cord injury. The physician inserts the needle into the spinal cavity at the space between the 3rd and 4th lumbar vertebrae.

19. The hormone epinephrine

- ☒ a. Increases blood pressure and heart rate **Correct**
- ☐ b. Controls thyroid activity
- ☐ c. Is associated with SAD
- ☐ d. Decreases urine production

The hormone epinephrine increases heart rate, blood pressure, and metabolic rate; the antidiuretic hormone (ADH) decreases urine production and calcitonin lowers blood calcium levels. Melatonin helps set diurnal rhythms and is associated with seasonal affective disorder (SAD).

20. Increased levels of which of the following are associated with heart attack?

- ☐ a. Albumin
- ☐ b. PSA
- ☒ c. CK **Correct**
- ☐ d. CEA

Increased levels of creatine kinase (CK) are associated with heart attack; PSA, or prostate specific antigen, level is used to test for prostate cancer. Carcinoembryonic antigen (CEA) is used in digestive system testing and albumin in urinary system testing.

21. The most frequent source of carryover contamination is

- ☐ a. Heparin
- ☒ b. EDTA tubes **Correct**
- ☐ c. PTT
- ☐ d. Coagulation tubes

EDTA tubes are more frequently associated with carryover contamination than any other types of additives, while heparin is associated with the least amount of interference. Coagulation tubes are the first to be used because all other additive tubes interfere with coagulation tests; partial thromboplastin time (PTT) tests are affected by tissue thromboplastin contamination.

22. Which of the following is the recommended order of draw for syringes?

- ☒ a. The SST follows the red top **Correct**
- ☐ b. The red top follows the SST
- ☐ c. The gray top is first
- ☐ d. Sterile specimens are last

In the recommended order of draw for syringes, sterile specimens are first, followed by light-blue tops; the SST follows the red top and the gray-top tube is last.

23. According to the alternate order of draw for syringes,

- ☐ a. The light-blue top is first
- ☐ b. The lavender top is first
- ☒ c. The red top and SST are last **Correct**
- ☐ d. The gray top is last

According to the alternate syringe order of draw, the sterile specimens remain first, while the red top and SST tubes are last.

24. A sign with a picture of fall leaves may be used to indicate

- ☐ a. Do not resuscitate order
- ☐ b. Miscarriage
- ☐ c. No blood pressures in right arm
- ☒ d. Fall precautions **Correct**

A sign with a picture of falling leaves indicates that fall precautions are required for the patient. The letters DNR indicate a do not resuscitate order, and a sign depicting a delete symbol over an arm with a needlestick indicates no blood pressures in right arm.

25. Which of the following statements regarding obtaining a blood specimen from a patient is FALSE?

- ☐ a. The phlebotomist should ask the patient's permission before collecting blood
- ☐ b. The patient has the right to refuse blood draw
- ☒ c. The name of the ordering physician on the ID band should not differ **Correct**
- ☐ d. Patient identity should always be verified

Occasionally, the name of the ordering physician, room number, or bed number on the patient's ID band may differ; however, patient identity must always be verified before collecting blood. As part of informed consent, patients have the right to refuse blood draw; thus, the phlebotomist must ask the patient's permission before collecting blood.

26. Which of the following statements regarding patient identification is FALSE?

- ☐ a. Outpatients may be identified by an ID card
- ☐ b. Outpatients should be asked to state their name and date of birth
- ☒ c. If a patient has been identified by the receptionist, no further verification is needed **Correct**
- ☐ d. A patient's response when his or her name is called is not sufficient for identification

The phlebotomist should always verify a patient's ID, even if he or she has been identified by the receptionist or has responded when his or her name has been called. Some outpatients may have been issued an ID card by the clinic; however, outpatients should still be asked to confirm their name and date of birth.

27. The preferred venipuncture site is the

- ☐ a. Cephalic vein
- ☒ b. Median cubital vein **Correct**
- ☐ c. Median basilic vein
- ☐ d. Median cephalic vein

Because the median cubital vein is closer to the surface and located in an area least prone to nerve damage, it is the preferred site for venipuncture. The cephalic and median cephalic veins are the second choice; the basilic and median basilic veins are least preferred because of their proximity to the median nerve and brachial artery.

28. All of the following statements regarding tourniquet application are true EXCEPT

- ☒ a. The patient should be told to pump his fist **Correct**
- ☐ b. A tourniquet may be applied over the patient's sleeve
- ☐ c. Two tourniquets may be used together
- ☐ d. A tourniquet should not be applied over an open sore

When applying a tourniquet, fist pumping should be discouraged, as it may make vein location more difficult or cause changes in blood components that may affect test results. A tourniquet may be applied over a patient's sleeve if the sleeve is too tight and cannot be rolled up far enough; a tourniquet should never be placed over an open sore. Because a tourniquet may have a tendency to roll or twist on the arm of an obese patient, two tourniquets may be placed on top of each other and used together.

29. An outpatient's blood should NOT be drawn

- ☐ a. While reclining in a chair
- ☐ b. While lying down
- ☐ c. Unless seated in a blood-drawing chair
- ☐ d. While seated on a stool **Correct**

Blood drawing should not be performed on an outpatient who is standing or seated on a high or backless stool because of the possibility of fainting. Outpatients should be seated on a special blood-drawing chair or on a chair with armrests; however, if the patient has a tendency to faint, he or she may be seated in a reclining chair or lying down.

30. When selecting a vein for venipuncture, you should

- ☐ a. Select a vein close to a pulse
- ☐ b. Use the basilic vein as an alternative if the median cubital vein cannot be located
- ☐ c. Palpate visible veins **Correct**
- ☐ d. Use your thumb to palpate a vein

In selecting a vein for venipuncture, even visible veins should be palpated to judge suitability for venipuncture. If the median cubital vein cannot be located, the basilic vein should not be used unless no other vein is more prominent because of the possibility of nerve injury or damage to the brachial artery. Do not use veins that overlie or are located close to a pulse to avoid the risk of puncturing an artery. The thumb should not be used because it has a pulse and may cause a vein to be mistaken for an artery.

31. If an antecubital vein cannot be located, you may

- ☐ a. Use a vein on the underside of the wrist
- ☒ b. Perform a capillary puncture **Correct**
- ☐ c. Manipulate the site until a vein can be found
- ☐ d. Use a tendon

If an antecubital vein cannot be found on either arm, a capillary puncture may be considered provided the test can be performed on capillary blood. Veins on the underside of the wrist should not be used to avoid nerve injury; tendons should not be used as they are difficult to penetrate and lack resilience. Manipulating the site may change blood composition, which may interfere with test results.

32. Proper technique for needle insertion includes

- ☐ a. Pushing down on the needle
- ☐ b. Using a C hold
- ☒ c. Using an L hold **Correct**
- ☐ d. Advancing the needle slowly

The proper technique for anchoring the vein before venipuncture is known as the L hold technique, which involves using the fingers to support the back of the patient's arm below the elbow and placing the thumb 1 to 2 inches and slightly to the side of the venipuncture site to pull the patient's skin toward the wrist; the C hold technique, or the two-finger technique, should not be used as it may result in the needle springing back into the phlebotomist's index finger if the patient pulls his or her arm back. Pushing down on the needle during insertion is painful and may increase the risk of blood leakage; advancing the needle too slowly may prolong the patient's discomfort.

33. Which of the following statements regarding blood specimens is FALSE?

- ☒ a. Outpatient and inpatient blood specimens have the same normal values **Correct**
- ☐ b. Hemoglobin and hematocrit have higher normal ranges at higher elevations
- ☐ c. Caffeine may affect cortisol levels
- ☐ d. Ingestion of butter or cheese may produce a milky specimen

Because outpatient specimens are not obtained during the basal state, normal values may differ slightly from those of inpatients; hemoglobin (Hgb), hematocrit (Hct), and red blood cell (RBC) counts may have higher normal ranges at higher elevations. Caffeinated beverages may affect cortisol levels; ingestion of lipids such as butter or cheese may increase blood lipid content, giving blood specimens a cloudy or milky appearance.

34. Blood levels of which of the following are normally lowest during the morning?

- ☐ a. Iron
- ☐ b. Insulin
- ☐ c. Potassium
- ☒ d. Glucose **Correct**

Blood glucose levels are usually lowest in the morning; however, iron, insulin, and potassium levels are usually highest in the morning.

35. Exercise increases levels of all of the following EXCEPT

- ☐ a. Protein
- ☐ b. Cholesterol
- ☒ c. Liver enzymes **Correct**
- ☐ d. Skeletal muscle enzymes

Exercise may increase levels of protein, insulin, glucose, and cholesterol, as well as skeletal muscle enzyme levels, but does not affect liver enzyme levels.

36. All of the following affect blood specimen composition EXCEPT

- ☐ a. Body position
- ☐ b. Temperature and humidity
- ☐ c. Fasting **Correct**
- ☐ d. Stress

Body position, environmental conditions such as temperature and humidity, and stress can affect blood specimen composition; fasting is useful in eliminating dietary influences on blood testing.

37. In which of the following patients is blood collection prohibited?

- ☐ a. Patient with a hematoma **Correct**
- ☐ b. Pregnant patient
- ☐ c. Mastectomy patient
- ☐ d. Patient with a tattoo

Venipuncture should never be performed through a hematoma; if there is no alternative, an area distal to the hematoma should be used. In patients with a tattoo, it is best to choose another site; however, if there is no alternative, the needle should be inserted in an area that does not contain dye. In a mastectomy patient, blood should not be drawn from the arm on the same side of the mastectomy, but can be drawn from the other arm. Pregnancy does not preclude blood collection.

38. In a patient with an IV, blood should NOT be drawn

- ☐ a. By capillary puncture
- ☐ b. Below the IV
- ☐ c. Above the IV **Correct**
- ☐ d. From a different vein

In a patient with an IV, blood should never be drawn from a site above the IV, as the specimen may become contaminated with IV fluid, causing erroneous test results. Venipuncture can be performed at a site distal to the IV, in a different vein than the one with the IV, or by capillary puncture.

39. In obtaining a blood specimen in a patient with an IV, the phlebotomist should

- ☐ a. Turn off the IV
- ☐ b. Restart the IV after venipuncture
- ☐ c. Select a site proximal to the IV
- ☒ d. Apply a tourniquet distal to the IV **Correct**

A phlebotomist is not qualified to start or adjust an IV; rather, he or she should ask the nurse to turn off the IV at least 2 minutes before blood collection and restart the IV after venipuncture. A site distal to the IV should always be selected for venipuncture.

40. A patient begins to faint during blood collection. The most appropriate line of action would be to

- ☐ a. Use an ammonia inhalant to revive the patient
- ☐ b. Continue the draw and quickly withdraw the needle
- ☒ c. Apply pressure to the site and lower the patient's head **Correct**
- ☐ d. Allow the patient to leave after regaining consciousness

If a patient faints during blood collection, discontinue the draw and discard the needle; pressure should be applied to the site to prevent bleeding and bruising and the patient should be asked to lower his or her head and breathe deeply to allow oxygenated blood to access the brain. Ammonia inhalants may produce side effects such as respiratory distress in asthmatic patients and should not be used. After he or she regains consciousness, the patient should remain in the room for at least 15 minutes.