

Laboratory Procedures Quiz

1. What is the most common anticoagulant used for hematology tests?

- A) Heparin
- B) EDTA
- C) Sodium citrate
- D) Potassium oxalate

2. What is the primary use of a refractometer in veterinary practice?

- A) Measuring blood glucose levels
- B) Determining urine specific gravity
- C) Counting white blood cells
- D) Assessing hematocrit levels

3. Which type of microscope is most commonly used in veterinary clinics?

- A) Electron microscope
- B) Compound light microscope
- C) Phase contrast microscope
- D) Fluorescence microscope

4. What is the normal range for canine packed cell volume (PCV)?

- A) 25-35%
- B) 37-55%
- C) 55-65%
- D) 10-20%

5. Which stain is most commonly used for blood smear examination?

- A) Gram stain
- B) Wright's stain
- C) Acid-fast stain
- D) Giemsa stain

6. What is the purpose of a urine sediment examination?

- A) To measure pH levels
- B) To detect and identify cells, crystals, and other substances
- C) To assess specific gravity
- D) To determine protein levels

7. Which of the following is NOT a common method of blood collection in small animals?

- A) Jugular venipuncture
- B) Cephalic venipuncture
- C) Lateral saphenous venipuncture
- D) Femoral artery puncture

8. What does BUN stand for in a biochemistry profile?

- A) Blood Urea Nitrogen
- B) Blood Urine Nitrate

- C) Basic Urea Nitrogen
- D) Blood Uric Neoplasm

9. What is the purpose of centrifugation in laboratory procedures?

- A) To heat samples
- B) To mix reagents
- C) To separate components of a mixture based on density
- D) To measure specific gravity

10. What does a high level of bilirubin in a blood test typically indicate?

- A) Kidney failure
- B) Liver dysfunction
- C) Pancreatic insufficiency
- D) Thyroid disorder

11. Which test is used to evaluate the liver function?

- A) Creatinine
- B) ALT (Alanine aminotransferase)
- C) Glucose
- D) BUN (Blood Urea Nitrogen)

12. What is the most common fixative used in cytology?

- A) Formalin
- B) Alcohol
- C) Glutaraldehyde
- D) Acetic acid

13. Which of the following urine crystals are commonly found in ethylene glycol toxicity?

- A) Struvite
- B) Calcium oxalate monohydrate
- C) Uric acid
- D) Amorphous phosphate

14. What is the primary purpose of performing a fecal flotation?

- A) To measure fecal pH
- B) To identify intestinal parasites
- C) To assess digestion efficiency
- D) To culture bacteria

15. How should you properly store a urine sample if immediate analysis is not possible?

- A) Keep it at room temperature
- B) Store it in a freezer
- C) Refrigerate it
- D) Leave it in direct sunlight

16. What does the presence of reticulocytes in a blood smear indicate?

- A) Anemia
- B) Leukocytosis

- C) Thrombocytopenia
- D) Normal blood function

17. What type of sample is needed for a coagulation profile?

- A) Whole blood with EDTA
- B) Serum
- C) Plasma with sodium citrate
- D) Urine

18. Which white blood cell type is primarily involved in allergic reactions and parasitic infections?

- A) Neutrophils
- B) Lymphocytes
- C) Eosinophils
- D) Monocytes

19. What is the purpose of performing a gram stain on a bacterial culture?

- A) To determine bacterial motility
- B) To differentiate bacterial species
- C) To assess antibiotic sensitivity
- D) To identify the shape of bacteria

20. What does the term "hemolysis" refer to?

- A) Increase in blood clotting
- B) Destruction of red blood cells
- C) Formation of new white blood cells
- D) Clumping of platelets

21. Which biochemical test is used to assess kidney function?

- A) ALT
- B) BUN
- C) ALP
- D) CK

22. Which of the following is an important safety practice when handling blood samples?

- A) Using mouth pipetting techniques
- B) Wearing gloves and protective clothing
- C) Reusing needles
- D) Storing samples at room temperature for extended periods

23. What is the normal specific gravity range for canine urine?

- A) 1.005 - 1.025
- B) 1.015 - 1.045
- C) 1.010 - 1.020
- D) 1.000 - 1.010

24. What type of cell is primarily counted in a differential white blood cell count?

- A) Red blood cells

- B) Platelets
- C) White blood cells
- D) Reticulocytes

25. Which of the following is NOT a common method for collecting a urine sample in small animals?

- A) Free catch
- B) Cystocentesis
- C) Bladder expression
- D) Arterial puncture

26. What does an elevated level of creatinine in the blood indicate?

- A) Liver dysfunction
- B) Kidney dysfunction
- C) Pancreatic insufficiency
- D) Thyroid disorder

27. What is the main purpose of a biochemistry profile?

- A) To evaluate organ function and metabolic status
- B) To assess clotting ability
- C) To measure blood pressure
- D) To test for infectious diseases

28. What is the preferred anticoagulant for coagulation studies?

- A) EDTA
- B) Sodium fluoride
- C) Sodium citrate
- D) Heparin

29. What type of sample is needed for a complete blood count (CBC)?

- A) Serum
- B) Plasma
- C) Whole blood with EDTA
- D) Urine

30. What does a left shift in a white blood cell count typically indicate?

- A) Viral infection
- B) Bacterial infection
- C) Parasitic infection
- D) Fungal infection

31. What is the purpose of a fecal smear?

- A) To identify bacteria and parasites
- B) To assess digestion efficiency
- C) To measure pH
- D) To culture fungi

32. What does the term "cytology" refer to?

- A) The study of cells
- B) The study of tissues
- C) The study of organs
- D) The study of blood

33. Which test is used to detect proteinuria?

- A) Urine dipstick
- B) Urine sediment examination
- C) Urine specific gravity
- D) Urine culture

34. What is the ideal blood-to-anticoagulant ratio for coagulation studies?

- A) 9:1
- B) 1:1
- C) 2:1
- D) 3:1

35. What does an elevated level of amylase in the blood typically indicate?

- A) Liver dysfunction
- B) Kidney dysfunction
- C) Pancreatic insufficiency
- D) Thyroid disorder

36. What is the most common method of identifying bacteria in a sample?

- A) Gram staining
- B) ELISA test
- C) Radiography
- D) Blood smear

37. Which cell type is primarily involved in clot formation?

- A) Erythrocytes
- B) Leukocytes
- C) Platelets
- D) Reticulocytes

38. What does the presence of casts in urine sediment typically indicate?

- A) Dehydration
- B) Kidney disease
- C) Liver dysfunction
- D) Diabetes mellitus

39. What is the significance of finding epithelial cells in a urine sample?

- A) Normal finding
- B) Indication of infection
- C) Indicator of dehydration
- D) Evidence of liver disease

40. What is the purpose of a bacterial culture and sensitivity test?

- A) To identify bacteria and determine the best antibiotic treatment
- B) To assess the virulence of bacteria
- C) To measure bacterial motility
- D) To evaluate bacterial metabolism

41. What does a high level of lactate in the blood indicate?

- A) Adequate oxygen delivery
- B) Hypoxia or poor perfusion
- C) Normal metabolic function
- D) Increased liver function

42. Which organ is primarily evaluated by measuring ALT levels?

- A) Kidney
- B) Liver
- C) Pancreas
- D) Thyroid

43. What is the primary use of a hemocytometer?

- A) Counting cells in blood or other fluids
- B) Measuring specific gravity
- C) Determining pH
- D) Assessing clotting time

44. What is a typical sign of contamination in a urine sample?

- A) Presence of bacteria
- B) Presence of epithelial cells
- C) High specific gravity
- D) Low pH

45. What is the purpose of performing a biochemical profile?

- A) To evaluate metabolic and organ function
- B) To count blood cells
- C) To measure blood pressure
- D) To identify parasites

46. Which of the following is used to preserve a tissue sample for histopathology?

- A) Formalin
- B) Alcohol
- C) Saline
- D) EDTA

47. What does the term "anemia" refer to?

- A) Low white blood cell count
- B) Low red blood cell count
- C) High platelet count
- D) High blood glucose

48. What does the presence of bilirubin in urine typically indicate?

- A) Kidney disease
- B) Liver disease
- C) Diabetes
- D) Infection

49. What is the significance of finding ketones in a urine sample?

- A) Normal metabolic function
- B) Diabetes or starvation
- C) Dehydration
- D) Liver disease

50. Which of the following is NOT a component of a complete blood count (CBC)?

- A) White blood cell count
- B) Hemoglobin concentration
- C) Blood glucose level
- D) Platelet count