Part 1 General Information and Overview of Procedures

1. Assess the laboratory's role in the testing of body fluids other than urine.
2. Identify the origin, composition, function, and collection procedures of body fluids discussed in this unit.
3. Given the number of cells seen, the dilution factor, the number and type (large or small) of squares manually counted on a Neubauer-type hemacytometer, calculate the number of RBC / WBC to be reported using appropriate units.
4. Using appropriate terminology, identify normal and abnormal color and transparency of body fluids.
5. Briefly describe the common hematology, serology, chemistry and microbiology tests performed on body fluids discussed in this unit, including expected results and correlation of abnormal results to disease processes.
6. Define the following terms as they apply to body fluids and body fluid analysis:
   - Amniocentesis & *amniotic fluid
   - Hemolytic Disease of the Fetus and Newborn (HDN / HDFN)
   - cystic fibrosis
   - iontophoresis / pilocarpine iontophoresis (electromotive drug administration/ EMDA)
   - steatorrhea
   - anacidity, hypochlorhydria, and achlorhydria
   - vaginitis / infectious vaginitis
   - clue cells

Part 2 Seminal Fluid

7. Discuss the major components of seminal fluid with regard to source, function, normal and abnormal appearance.
8. List three (3) reasons for semen analysis.
9. Outline instructions to give to a patient to prepare for and collect a semen specimen for laboratory testing.
10. Describe the appropriate semen specimen processing and analyzing procedures, along with the expected results.
11. List two (2) methods for identifying a questionable fluid as semen.
12. State the significance of finding increased acid phosphatase in a suspicious fluid.
13. Calculate a sperm count when provided with the number of sperm counted, the dilution factor and the area of the counting chamber used.
15. Identify tests used to determine sperm viability including expected results.

Part 3 Amniotic Fluid

16. Describe HCG, explain its role in pregnancy testing, and identify causes for false negative and false positive results.
17. State three (3) reasons for amniotic fluid analysis.
18. Describe tests performed on amniotic fluid to determine risk of Hemolytic Disease of the Fetus and Newborn (HDFN) and fetal maturity.
19. Define amniocentesis and list special precautions needed for this procedure.
20. Describe the handling and processing procedures for testing amniotic fluid.
21. Explain the principle of spectrophotometric analysis of amniotic fluid for bilirubin and the interpretation of results as to level of risk to the fetus.
22. Evaluate the L/S ratio including its significance and normal value in a mature fetus.
23. Identify the significance of phosphatidyglycerol and the "foam" or "shake" test.
24. Explain the significance of alpha fetal protein and cytogenetic analysis of amniotic fluid.

Part 4 Sweat Test
25. Define cystic fibrosis (CF).
26. Describe the methodology of the sweat chloride test.
27. Analyze the sweat chloride values seen in patients suspected of having CF.

Part 5 Gastric Fluid
28. Describe the physiology and composition of gastric fluid; including the role of gastrin in its production.
29. List two (2) reasons for gastric fluid analysis.
30. Explain the special patient preparation that should occur before gastric fluid is analyzed.
31. Describe the Zollinger-Ellison Syndrome.
32. Describe the procedure for gastric acidity and state the clinical significance.
33. Describe gastric fluid drug screening and its clinical significance.

Part 6 Feces
34. Describe the normal contents of a fecal specimen.
35. List four (4) reasons for performing fecal analysis.
36. Identify the special patient preparation that should occur before certain fecal analyses are performed.
37. State the characteristic appearance of a fecal specimen in upper gastrointestinal (GI) bleeding, lower GI bleeding, bile duct obstruction and steatorrhea.
38. Briefly describe the procedures used and the clinical significance of: fecal leukocytes, fecal fat and occult blood testing.
39. State reasons for false positive and false negative results for the Guaiac occult blood test.
40. Discuss the immunochemical fecal occult blood test (iFOBT) to include basic principle and advantages.
41. Identify the most common organisms causing bacterial and parasitic infections in the stool specimen.
42. Describe and interpret the microscopic results of Sudan III stained fecal smears from normal patients and patients with steatorrhea.
43. Given a picture of an example test or its description, evaluate the results of an APT test for fetal hemoglobin.

Part 7 Miscellaneous Fluid testing
44. Identify the expected / normal test results and significant cells seen in the following fluids: bronchoalveolar lavage, nasal, cyst, tears, and breast milk.

Part 8 Wet Preps
45. Identify the characteristics of normal and abnormal vaginal secretions including color/clarity, pH, and smell.
46. Define vaginitis and list at least three (3) of its symptoms.
47. Identify at least two (2) sources of error that can occur during the collection and processing of vaginal wet prep specimens.
48. List three (3) common causes of infectious vaginitis.
49. Describe "clue cells" and explain the significance of finding them in a vaginal wet prep.
50. Evaluate the test for estrogenic activity including the appearance of positive and negative results.