Name _____ Seat # _____ Period _____
Teacher _____ Date _____

Hematology Study Questions (5 points toward notebook grade)

Directions: Write your answers directly on this copy in the spaces provided.

1. Where are blood cells made?
2. Describe blood formations from fetal life through adulthood.

3. List two sites where capillary blood may be obtained.
4. What is an anticoagulant? List 3 examples.

5. Which is the most common anticoagulant used in the hematology and how does it work?

6. List all the components of a CBC (complete blood count) and the normal range for each.

7. Name the 3 layers of anticoagulant blood which occur when blood is allowed to separate by standing.

8. Define hemolysis.
9. Define hypotonic, hypertonic, and isotonic solutions.

10. What is the concentration of isotonic saline?
11. Define homeostasis.
12. Define aplastic bone marrow.
13. Define the reticulocyte.
14. What is the normal range of reticulocytes in the blood?
15. List 4 functions of the blood.

16. What is the main function of the red blood cells?
17. What is the life span on red blood cells?
18. Describe the condition of iron deficiency anemia and explain its cause.

19. Name six types of normal white blood cells found in the peripheral circulation.

20. Which of the above cells are granulocytes and which are non-granulocytes?
21. Define hematopoesis.
22. What are megakaryocytes?
23. Name two functions of platelets in the clotting mechanism.
24. Describe sickle cell anemia.
25. Define methemoglobin.
26. Define anemia. List two types of anemia and their causes.

27. What is hemoglobin and what is its function?

28. List the normal Hb values for men and women.
29. What reagent is used in the cyanmethemoglobin method and what two chemicals does it contain?

30. What is the Salhi pipette and what volume does its measure?
31. Define hematocrit.
32. List the normal Hct values for men and women.
33. Write the formulas used to calculate MCV, MCH, MCHC (include the units for each index).

34. Define erythrocyte sedimentation rate (ESR).
35. The accuracy of the ESR depends on technical factors. Name 3 of these factors.

36. Patient results of ESR depend on several physiologic. List 3 of these factors.

37. What is the general condition that causes the ESR to be increased?
38. What are the normal values for the ESR for men and women?
39. Define leukocytes, leucopenia, leukocytosis, and leukemia.

40. List 1 cause for an increased leukocyte count and 1 cause for a decreased leukocyte count.
41. What is the most commonly used diluent for the white cell count and what is its function?
42. What is the routine dilution used for the WBC count?
43. What is the usual diluent used for RBC count?
44. What is the routine dilution used for the RBC count?
45. What is the total correction factor used for counting white cells on the hemacytometer?
46. What is the area counted in a manual white cell count?
47. What is the total correction factor used for counting red cells on the hemacytometer?
48. What is the hemacytometer?
49. What is the area counted in a manual white cell count?
50. What are the normal values for RBC's and WBC's for men and women?
51. What is the normal range for platelets?
52. Are platelets true cells? Why or why not?
53. List 2 diseases or conditions which are associated with a high platelet count.
54. List 2 diseases or conditions which are associated with a low platelet count.
55. A correctly made blood smear should occupy how much of the slide?
56. What is the name of the most common instrument used to count RBC's and WBC's?
57. Define rouleaux, nomochromic, hypochromic, and hyperchromic.

58. Define microyotic, macrocytic, anisocytosis, and nomocytic.

59. Define poikliocytosis, sickle cells, spherocytes, ovalocytes, and basophilic strippling.

60. What two dyes is the Wright's stain composed of?
61. What is the constant factor used for counting white cells on the hemacytometer?
62. What is the constant factor used for counting red cells on the hemacytometer?
63. What is the feathered edge?
64. When a WBC differential is performed, in addition to the enumeration of WBC and their types, what other two tests are also conducted?