

Blood - Chapter 17

1. What are the functions of blood?
2. What is whole blood, what are the two components of whole blood?
3. What percentage of whole blood is composed of plasma, and formed elements?
4. What are the functions of the following plasma proteins: albumin, globulins, fibrinogen.
5. Define “formed elements”, what cells are found within the formed elements, and which of the formed elements are not considered true cells?
6. Define hematocrite, what is considered to be a normal average?
7. What percentage of whole blood is composed of leukocytes, and erythrocytes?
8. What cell type is found in the buffy coat after whole blood has been centrifuged?
9. What are the functions of erythrocytes?
10. What is the general anatomy of an erythrocyte?
11. What is hemoglobin composed, where do you find it, and how does it carry oxygen?
12. What is the typical life span of a red blood cell?
13. What are the 5 different leukocytes (WBC), what are the two main categories, and what are their functions?
14. What are T-cells, and B-cells? How do they participate in the immune response?
15. List the order of leukocytes from most abundant to least abundant.
16. What is the function of red bone marrow, yellow bone marrow, and where in the body do you find it?
17. Define Hematopoiesis
18. Describe the steps in the formation of erythrocytes, and WBCs (up to the blast stage), what is the significance of each stage, and what are the possible cell outcomes of each stage?
19. What is the function of platelets? How are megakaryocytes related to platelets?
20. Describe the following blood disorders: polycythemia, anemia, sickle cell disease, leukemia, thrombocytopenia.

Sample test questions:

Matching. Each answer may be used more than once.

- A. Erythrocyte
 - B. Neutrophil
 - C. Basophile
 - D. Platelets
 - E. Two of the above
1. Participates in blood clotting.
 2. Not considered a true cell
 3. Least abundant leukocyte
 4. Phagocytotic cell

Multiple Choice.

5. Which of the following is false about an erythrocyte?
 - A. Are Binconcave
 - B. Contain hemoglobin
 - C. Transport oxygen
 - D. Does not contain a nucleus
 - E. All of the above are true about an erythrocyte.
6. Which of the following blood cells increases blood flow to damaged tissue?
 - A. Neutrophil
 - B. Basophile
 - C. Eosinophil
 - D. Monocyte
 - E. Lymphocyte
7. Which of the following elements are found in the buffy coat of a hematocrite tube:
 - A. RBCs
 - B. WBCs
 - C. Platelets
 - D. Plasma proteins
 - E. Two of the above

True/False

8. Erythrocytes have a nucleus at some point in their life span
9. All blood cells differentiate from a myeloid stem cell
10. Low levels of erythrocytes leads to anemia
11. Hemtopoiesis is the development of the blood clot
12. Red blood cells are developed in the red bone marrow, all other blood cells develop in the yellow marrow.