

Circulatory System and Blood

1. A. What are the functions of the circulatory system? B. Name and describe the main structures of the circulatory system.
2. A. What is the basic function of a heart? What is pulmonary circulation and what is its purpose? C. What is systemic circulation and what is its purpose?
3. A. Trace the path of blood (write out or diagram the structures) starting with the right atrium. Be able to trace the path from any point in the circulatory system. B. Put a check next to those structures that contain oxygenated blood.
4. A. What is the natural pacemaker of the heart and where is it located? B. Describe how the pacemaker works and how cardiac rhythm is maintained. Describe the path of electrical impulses in the heart and explain how the beating of the heart (contraction of the chambers) is related.
5. A. What is atherosclerosis? B. What causes a heart attack? How is cholesterol involved? How are platelets involved?
6. Describe the following blood vessels in terms of location and/or direction of blood flow, relative sizes, and basic structure: arteries, veins, arterioles, venules, capillaries.
7. Blood: A. What is plasma? What is it composed of and what percent of the blood does it represent? B. Cellular components of the blood account for what percentage of blood volume? C. Name and describe the structures and functions of the three cellular components (RBCs, WBC's, Platelets) of blood.

Respiratory System

8. A. Name the major structures in the human respiratory system and give their functions B. Which are used for air transport and which for gas exchange? C. Be able to locate them on a diagram.
9. Discuss the functions of the respiratory system as outlined in class.
10. A. Which blood gas concentration controls breathing? B. By what process is gas exchanged between the capillaries and the tissues of the body? C. Why does your breathing rate increase when you exercise? D. What structures expand or "move" to allow the chest cavity to expand during air intake?