



Chapter 35 Exercises

Review Questions

1. Why are open circulatory systems advantageous to some animals?
 - a. They use less metabolic energy.
 - b. They help the animal move faster.
 - c. They do not need a heart.
 - d. They help large insects develop.
2. Some animals use diffusion instead of a circulatory system. Examples include _____.
 - a. birds and jellyfish
 - b. flatworms and arthropods
 - c. mollusks and jellyfish
 - d. none of these
3. Blood flow that is directed through the lungs and back to the heart is called _____.
 - a. unidirectional circulation
 - b. gill circulation
 - c. pulmonary circulation
 - d. pulmocutaneous circulation
4. White blood cells _____.
 - a. can be classified as granulocytes or agranulocytes
 - b. defend the body against bacteria and viruses
 - c. are also called leukocytes
 - d. all of these
5. Platelet plug formation occurs at which point?
 - a. when large megakaryocytes break up into thousands of smaller fragments
 - b. when platelets are dispersed through the bloodstream
 - c. when platelets are attracted to a site of blood vessel damage
 - d. none of these
6. In humans, the plasma comprises what percentage of the blood?
 - a. 45%
 - b. 55%
 - c. 25%
 - d. 90%
7. The red blood cells of birds differ from mammalian red blood cells because _____.
 - a. they are white and have nuclei
 - b. they do not have nuclei
 - c. they have nuclei
 - d. they fight disease
8. The heart's internal pacemaker beats by _____.
 - a. an internal implant that sends an electrical impulse through the heart
 - b. the excitation of cardiac muscle cells at the sinoatrial node followed by the atrioventricular node
 - c. the excitation of cardiac muscle cells at the atrioventricular node followed by the sinoatrial node
 - d. the action of the sinus
9. During the systolic phase of the cardiac cycle, the heart is _____.
 - a. contracting
 - b. relaxing
 - c. contracting and relaxing
 - d. filling with blood
10. Cardiomyocytes are similar to skeletal muscle because _____.
 - a. they beat involuntarily
 - b. they are used for weight lifting
 - c. they pulse rhythmically
 - d. they are striated

11. How do arteries differ from veins?
 - a. Arteries have thicker smooth muscle layers to accommodate the changes in pressure from the heart.
 - b. Arteries carry blood.
 - c. Arteries have thinner smooth muscle layers and valves and move blood by the action of skeletal muscle.
 - d. Arteries are thin walled and are used for gas exchange.
12. High blood pressure would be a result of _____.
 - a. a high cardiac output and high peripheral resistance
 - b. a high cardiac output and low peripheral resistance
 - c. a low cardiac output and high peripheral resistance
 - d. a low cardiac output and low peripheral resistance

Critical Thinking Questions

13. Describe a closed circulatory system.
14. Describe systemic circulation.
15. Describe the cause of different blood type groups.
16. List some of the functions of blood in the body.
17. How does the lymphatic system work with blood flow?
18. Describe the cardiac cycle.
19. What happens in capillaries?
20. How does blood pressure change during heavy exercise?