Study Guide

CHAPTER 34

Section 1: The Circulatory System

In your textbook, read about the functions of the circulatory system.

If the statement is true, write true. If the statement is false, replace the italicized word or phrase to make it true.

1. The circulatory system consists of three parts: the blood, the heart, and the blood vessels.

2. The heart pumps blood through a network of tubes inside the body called blood vessels.

3. The circulatory system transports oxygen and nutrients to cells and removes wastes from body cells.

4. The circulatory system distributes water throughout the body to help regulate body temperature.

5. The circulatory system contains cell clots and proteins.

In your textbook, read about the structure of the heart. Use these choices:

- aorta
- pulmonary veins
- left atrium
- right atrium
- left ventricle
- right ventricle
- pulmonary arteries

6. ______________________

7. ______________________

8. ______________________

9. ______________________

10. ______________________

11. ______________________

12. ______________________
In your textbook, read about how the heart beats.

Write the term or phrase that best completes each statement. Use these choices:

- atrioventricular node
- pulse
- sinoatrial node
- systole

13. A group of cells called the pacemaker, or _____________, in the right atrium sends out signals that tell the heart muscle to contract.

14. The _____________ transmits the signal that causes both ventricles to contract.

15. The alternating expansion and relaxation of the artery wall caused by contraction of the left ventricle is the _____________.

16. The blood pressure caused by contraction of the heart is called _____________.

In your textbook, read about blood components.

Complete the table by checking the correct column(s) for each description.

<table>
<thead>
<tr>
<th>Description</th>
<th>Red Blood Cell</th>
<th>White Blood Cell</th>
<th>Platelet</th>
<th>Plasma</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Contains hemoglobin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Carries glucose and fats</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Lacks a nucleus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Releases chemicals that form fibrin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Transports oxygen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Produced in bone marrow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Clear, yellowish fluid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Helps clot blood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Fights infection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In your textbook, read about the importance of respiration.

Use each of the terms below only once to complete the passage.

breathing  carbon dioxide  external  internal  lungs  oxygen  respiration

The function of the respiratory system is to sustain cellular (1) ..........................................

This is done by supplying (2) ........................................ to cells and removing (3) ........................................ waste from cells. (4) ........................................ is the mechanical movement of air into and out of the (5) .........................................

(6) ........................................ respiration is the exchange of gases between the atmosphere and the blood that occurs in the lungs. (7) ........................................ respiration is the exchange of gases between the blood and the body’s cells.

In your textbook, read about the path of air.

Match the description in Column A with the structure in Column B.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. large tubes that enter each lung from the trachea</td>
<td>A. mouth or nose</td>
</tr>
<tr>
<td>9. thin-walled, individual air sacs within the lungs</td>
<td>B. trachea</td>
</tr>
<tr>
<td>10. small branches off larger tubes within each lung</td>
<td>C. bronchi</td>
</tr>
<tr>
<td>11. filters out dust; warms and moistens air</td>
<td>D. bronchioles</td>
</tr>
<tr>
<td>12. branches into two large tubes that go to the lungs</td>
<td>E. alveoli</td>
</tr>
</tbody>
</table>

In your textbook, read about breathing.

Mark the figure to the right as each statement directs.

13. Draw red arrows on the figure to show the movement of air and the diaphragm during inhalation.
14. Draw blue arrows on the figure to show the movement of air and the diaphragm during exhalation.
**Study Guide**

**CHAPTER 34**  
**Section 3: The Excretory System**

In your textbook, read about the parts of the excretory system and the kidneys.

Complete the table by checking the correct column(s) for each organ.

<table>
<thead>
<tr>
<th>Primary Material(s) Removed</th>
<th>Salts</th>
<th>Carbon Dioxide</th>
<th>Water</th>
<th>Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lungs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kidneys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Respond to each statement.

4. **Name** the major excretory organ in the body.

5. **Cite** a way that the excretory system helps maintain homeostasis, besides removing wastes, water, carbon dioxide, and salts.

In your textbook, read about the kidneys.

*Label the diagram of a nephron. Use these choices:*

- Bowman's capsule  
- capillaries  
- glomerulus  
- convoluted tubule  
- to ureter

6. 

7. 

8. 

9. 

10. 

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