Respiration and Excretion

Part A. Vocabulary Review

Directions: Unscramble the letters to form the correct word for each definition.

1. anhxypr  - tubelike passageway for both food and air
2. ryalxn  - structure to which vocal cords are attached
3. erhcaat  - tube with cartilage, mucous membranes, and cilia
4. hobirn  - branches of the trachea
5. iavello  - clusters of thin-walled air sacks in the lungs
6. pridamagh  - muscle under lungs that helps air move in and out
7. rarnuyi semsty  - tubes that lead from each kidney to the bladder
8. snedyik  - system made up of excretory organs.
9. sponnher  - major organs of urinary system
10. neiru  - filtering units of the kidneys
11. derdabl  - waste fluid that is excreted from the body
12. etreurs  - organ that holds urine until it is excreted
13. ratruhe  - tube that leads to the outside of the body

Directions: Complete the following lists.

14. List four diseases or disorders of the respiratory system.
   a. 
   b. 
   c. 
   d.

15. List the five major excretory organs.
   a. 
   b. 
   c. 
   d. 
   e.
Part B. Concept Review

Directions: Study the diagram of the respiratory system below. Then label each of the numbered structures.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________

Directions: Study the breathing processes below. Then identify each as Inhaling or Exhaling.

8. The ____________________ Process  
   Diaphragm relaxes, rib cage moves down.  
   Chest cavity volume is reduced.  
   Air pressure in cavity is increased.

9. The ____________________ Process  
   Diaphragm contracts, rib cage moves up.  
   Chest cavity volume increases.  
   Air pressure in cavity is reduced.

10. List three functions of the urinary system.
    a. ____________________
    b. ____________________
    c. ____________________

11. Describe how the skin and lungs function as excretory organs.
    ____________________
    ____________________
    ____________________

12. Explain the exchange of oxygen and carbon dioxide in the lungs.
    ____________________
    ____________________
    ____________________
    ____________________
    ____________________

I. Testing Concepts

Directions: Match the description in Column I with the item in Column II by writing the correct letter in the space provided. Some items in Column II are not used.

Column I

1. structure to which vocal cords are attached
2. tube with cartilage, mucous membranes, and cilia
3. branches of the trachea
4. clusters of thin-walled air sacs
5. muscle beneath lungs that helps air move in and out
6. disease resulting in the alveoli losing their ability to expand and contract
7. major organs of urinary system
8. filtering units of the kidneys
9. tubes that lead from each kidney to the bladder
10. organ that holds urine until it leaves the body

Column II

a. alveoli
b. asthma
c. bladder
d. bronchi
e. chronic bronchitis
f. diaphragm
g. emphysema
h. kidneys
i. larynx
j. nephrons
k. trachea
l. ureters
m. urethra

Directions: For each of the following, write the letter of the term or phrase that best completes each sentence.

11. When you breathe, your lungs take in oxygen and remove ______.
   a. air  b. carbon dioxide  c. nitrogen  d. nitrogen dioxide

12. Cell respiration involves supplying your body’s cells with ______.
   a. oxygen  b. blood  c. bone marrow  d. enzymes

13. The ______ is a tubelike passageway for both food and air.
   a. epiglottis  b. larynx  c. pharynx  d. trachea

14. Within the lungs, the exchange of oxygen and carbon dioxide occurs between the ______ and the capillaries.
   a. trachea  b. bronchi  c. alveoli  d. diaphragm

15. The ______ prevents food or liquid from entering your trachea.
   a. alveoli  b. bronchi  c. epiglottis  d. larynx

16. People whose ______ don’t work may have to undergo dialysis.
   a. alveoli  b. bladders  c. kidneys  d. lungs
17. When urinary organs don’t work, all of the following occur EXCEPT _____.
   a. swelling  
   b. homeostasis  
   c. accumulation of wastes  
   d. salt imbalance

18. A disorder of the lungs called _____ is often an allergic reaction.
   a. asthma  
   b. chronic bronchitis  
   c. emphysema  
   d. lung cancer

19. _____ in cigarette smoke is the greatest contributor to lung cancer.
   a. Hydrogen  
   b. Nicotine  
   c. Oxygen  
   d. Tar

20. The main excretory organs of your body are the large intestine, kidney, lungs, and _____.
   a. heart  
   b. ureter  
   c. pancreas  
   d. skin

21. The organs of your urinary system are _____ organs.
   a. circulatory  
   b. excretory  
   c. skeletal  
   d. respiratory

22. A tube called the _____ leads from the bladder to the outside of the body.
   a. bladder  
   b. nephron  
   c. ureter  
   d. urethra

23. The amount of water in blood is important in maintaining all of the following EXCEPT _____.
   a. healthy circulation  
   b. normal blood pressure  
   c. the movement of gases  
   d. the movement of mucous

II. Understanding Concepts

Skill: Outlining

Directions: Use the terms and phrases below to complete the outline.

<table>
<thead>
<tr>
<th>Diseases and disorders</th>
<th>Functions</th>
<th>Lung cancer</th>
<th>Removes carbon dioxide</th>
</tr>
</thead>
</table>

Your Respiratory System

I.  
   A. Supplies blood with oxygen
   B.  
   C. Removes water from the body

II.  
   A. Emphysema
   B. Chronic bronchitis
   C. Asthma
   D.  
Skill: Comparing and Contrasting

Directions: Descriptions of four diseases or disorders of the respiratory system are listed in the chart below. Complete the chart by writing the name of the disease or disorder next to its description.

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>much mucus is produced; coughing harms cilia and bronchial tubes</td>
</tr>
<tr>
<td>6.</td>
<td>major cause is smoking; leading type of cancer deaths</td>
</tr>
<tr>
<td>7.</td>
<td>wheezing; bronchial tubes contract quickly: often an allergic reaction</td>
</tr>
<tr>
<td>8.</td>
<td>main cause is smoking; alveoli in lungs lose their ability to expand and contract</td>
</tr>
</tbody>
</table>

Directions: Complete the paragraphs by filling in the blanks.

Breathing is partly the result of changes in air pressure. Gases move from an area of 9. __________________ pressure to an area of 10. __________________ pressure.

When your 11. __________________ contracts and moves 12. __________________, you inhale. This causes the volume of your chest cavity to increase, resulting in 13. __________________ air pressure within your chest cavity. Your lungs fill with air. Air outside the body, now under greater pressure, pushes into your air passageways and lungs. The lungs expand as the air rushes in.

When you exhale, your diaphragm relaxes and returns to its dome shape. Your rib cage moves downward. These two actions 14. __________________ the size of your chest cavity. Your lungs return to their original position. Air pressure on your lungs 15. __________________. The gases inside your lungs are pushed out through air passages.
Chapter Test (continued)

III. Applying Concepts

Directions: Listed below are five activities of the respiratory system. Give a function of each.

1. cell respiration ________________________________
2. inhaling ________________________________
3. air moves through nostrils ________________________________
4. air enters the nasal cavity ________________________________
5. exhaling ________________________________

Directions: List three functions of the urinary system.

6. ________________________________
7. ________________________________
8. ________________________________

IV. Writing Skills

Directions: Using complete sentences, answer the following questions.

1. Describe why the skin and lungs are classified as excretory organs.
   ________________________________
   ________________________________

2. Explain how oxygen and carbon dioxide are exchanged in the lungs.
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________