

## Respiratory System Study Questions

Dr. J. Lim

Utilize your notes and textbook to answer the following questions.

1. The respiratory system works together with the \_\_\_\_\_ system to supply \_\_\_\_\_ to cells and rid \_\_\_\_\_ from the cells.
2. The entire respiratory tract is lined with respiratory \_\_\_\_\_.
3. Cellular respiration occurs within this cellular organelle. \_\_\_\_\_
4. Complete this equation describing cellular respiration.  
Oxygen + \_\_\_\_\_  $\rightarrow$  ATP + \_\_\_\_\_
5. The vocal cords (folds) are found in this structure. \_\_\_\_\_.
6. The respiratory disorder that involves the loss of alveolar surface area is called \_\_\_\_\_.
7. Another name for the windpipe is the \_\_\_\_\_.
8. List three functions of respiratory mucosa.
  
9. The trachea splits inferiorly into a pair of \_\_\_\_\_.
10. The answer in Q9 splits repeatedly to form many \_\_\_\_\_.
11. The slit-like passageway between the vocal cords is called the \_\_\_\_\_.
12. Name the common passageway in the back of the throat that both food and air pass through. \_\_\_\_\_
13. The blood in the pulmonary artery is high in oxygen. T or F
14. The blood in the pulmonary vein is high in oxygen. T or F
15. Oxygen and carbon dioxide exchange in external respiration requires ATP. T or F
16. Which structure is called the “guardian of the airway?” \_\_\_\_\_
17. Describe the position of the structure in Q17 while breathing. \_\_\_\_\_
18. Describe the position of the structure in Q17 while swallowing. \_\_\_\_\_
19. What does the larynx do when swallowing? \_\_\_\_\_
20. Towards which structure do the cilia of the trachea beat? \_\_\_\_\_
21. The “end of the road” for ventilated air is the structure that resembles a cluster of grapes called \_\_\_\_\_.
22. The process by which gas exchange occurs between an alveolus and capillaries is called \_\_\_\_\_.
23. Internal respiration involves gas exchange between \_\_\_\_\_.
24. Oxygen binds to iron molecules in the \_\_\_\_\_ of red blood cells.

*Circle the correct underlined choice*

25. With inspiration, the rib cage moves up and out/down and in and the diaphragm contracts/relaxes and moves up/down.
26. With expiration, the rib cage moves up and out/down and in and the diaphragm contracts/relaxes and moves up/down.
27. Air moves passively during this event of ventilation. expiration/inspiration

## Respiratory System Study Questions KEY

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Utilize your notes and textbook to answer the following questions.

1. The respiratory system works together with the **cardiovascular** system to supply **oxygen** to cells and rid **carbon dioxide** from the cells.
2. The entire respiratory tract is lined with respiratory **mucosa**.
3. Cellular respiration occurs within this cellular organelle. **mitochondria**
4. Complete this equation describing cellular respiration.  
$$\text{Oxygen} + \text{glucose} \rightarrow \text{ATP} + \text{CO}_2$$
5. The vocal cords (folds) are found in this structure. **larynx**
6. The respiratory disorder that involves the loss of alveolar surface area is called **emphysema**.
7. Another name for the windpipe is the **trachea**.
8. List three functions of respiratory mucosa.  
**Warms, filters, and moistens inhaled air**
9. The trachea splits inferiorly into a pair of **bronchi**.
10. The answer in Q9 splits repeatedly to form many **bronchioles**.
11. The slit-like passageway between the vocal cords is called the **glottis**.
12. Name the common passageway in the back of the throat that both food and air pass through. **pharynx**.
13. The blood in the pulmonary artery is high in oxygen. **False**
14. The blood in the pulmonary vein is high in oxygen. **True**
15. Oxygen and carbon dioxide exchange in external respiration requires ATP. **False**
16. Which structure is called the “guardian of the airway?” **epiglottis**
17. Describe the position of the structure in Q17 while breathing. **up**
18. Describe the position of the structure in Q17 while swallowing. **tips down over larynx**
19. What does the larynx do when swallowing? **moves up**
20. Towards which structure do the cilia of the trachea beat? **pharynx**
21. The “end of the road” for ventilated air is the structure that resembles a cluster of grapes called **alveoli**.
22. The process by which gas exchange occurs between an alveolus and capillaries is called **passive diffusion**.
23. Internal respiration involves gas exchange between **blood vessels and body cells**.
24. Oxygen binds to iron molecules in the **hemoglobin** of red blood cells.

Circle the correct underlined choice

25. With inspiration, the rib cage moves up and out and the diaphragm contracts and moves down.
26. With expiration, the rib cage moves down and in and the diaphragm relaxes and moves up.
27. Air moves passively during this event of ventilation. inspiration