Name: _____ **Class:** _____ **Date:** _____ **ID: A**

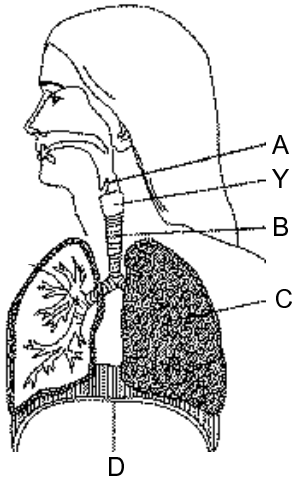
Respiratory and Excretory Systems - B

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

____ 1. What is the most important function of the respiratory system?
a. To move air past the vocal cords and create sound.
b. To move oxygen from the outside environment into the body.
c. To provide structural support for the chest cavity.
d. To generate enough air pressure so the lungs do not collapse.

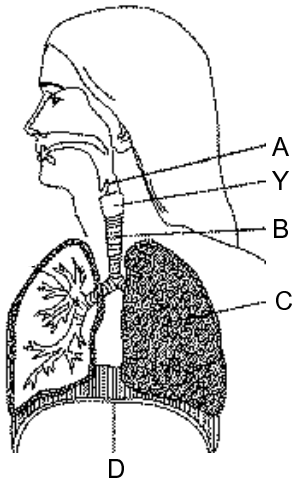
____ 2. What role do mucus and cilia play in the respiratory system?
a. They help foreign substances travel down to your lungs.
b. They clean and moisten the air you breathe in.
c. They help you smell and taste the food you eat.
d. They slow down the flow of air into your lungs.

____ 3. Where in the respiratory system does gas exchange occur?



a. Part A
b. Part C
c. Part Y
d. Part B

____ 4. Which part of the diagram shows the trachea?



a. Part B
b. Part C
c. Part D
d. Part A

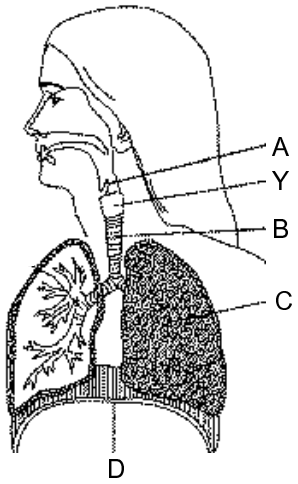
____ 5. Which two organ systems work together to get oxygen to your cells?

a. Circulatory and Respiratory System.
b. Respiratory and Muscular System.
c. Circulatory and Muscular System.
d. Circulatory and Excretory System.

____ 6. When you breathe, which route does the incoming air go on its way to the lungs?

a. Nose - Bronchi - Trachea - Pharynx
b. Nose - Pharynx - Trachea - Bronchi
c. Nose - Trachea - Bronchi - Pharynx
d. Nose - Trachea - Pharynx - Bronchi

____ 7. Which structure causes breathing by moving air in and out of the body when it contracts and relaxes?

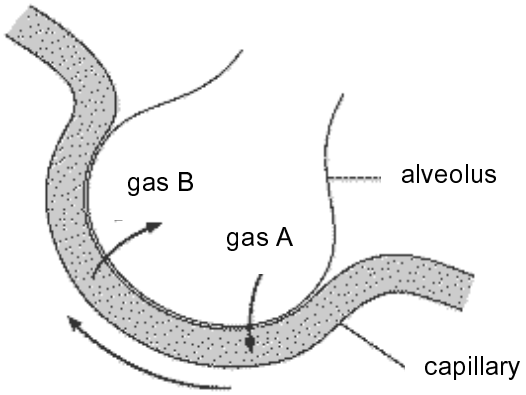


a. Part D
b. Part B
c. Part A
d. Part C

____ 8. What probably happens to a person if Part Y (larynx) is damaged or infected?

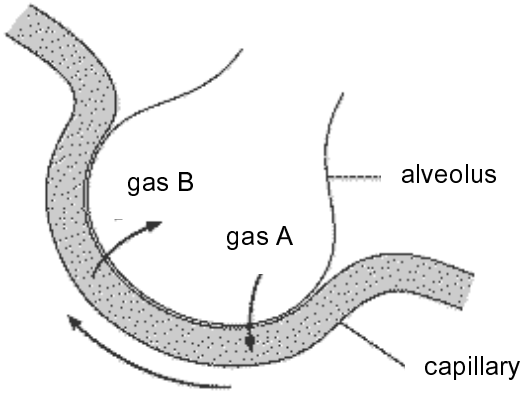
a. They would have trouble coughing.
b. They would have trouble speaking.
c. They would have trouble breathing.
d. They would have trouble swallowing..

____ 9. What happens to the blood as it passes through the capillary around the alveolus?



a. Oxygen and carbon dioxide enter the blood and nitrogen leaves the blood.
b. Air enters the blood and water vapor leaves the blood.
c. Carbon dioxide enters the blood and oxygen leaves the blood.
d. Oxygen enters the blood and carbon dioxide leaves the blood.

____ 10. The walls of the alveoli and capillaries are very thin. Why are the thin walls important to their function?



a. They allow gases to flow easily into and out of the blood.
b. They allow room for many alveoli to fit in the lungs.
c. They prevent the spread of infection into the blood.
d. They prevent too much blood from building up in the lungs.

____ 11. How does the air you breathe out compare to the air you breathe in?

a. The air you breathe out contains more oxygen, but less carbon dioxide and water vapor.
b. The air you breathe out contains less oxygen, but more carbon dioxide and water vapor.
c. The air you breathe out contains more oxygen, carbon dioxide, and water vapor.
d. The air you breathe out contains less oxygen, carbon dioxide and water vapor.

____ 12. You notice as you run up a flight of stairs to your next class that your heart rate is pounding and your breating is deeper and more rapid than when you started. After a short time sitting in class, your respiration rate and heart rate seem to return to normal. You know that during exercise, your heart rate, respiration rate, and ability to hold your breathe (maximum breath-holding time) change. You gather the data shown in the table below. Use this data to answer questions #12, 13, and 14.

	Pulse rate (beats/min)	Respiration rate (breaths/min)	Blood pressure (diastolic/systolic)	Maximum breath-holding time
Normal (standing)	75	12	110/80	55
Walking up stairs	90	15	120/80	45
Running up stairs	110	20	130/80	30

As exercise becomes more strenuous (harder), which changes occur?

a. Pulse rate and respiration rate increase while diastolic blood pressure decreases.
b. Pulse rate, respiration rate, and diastolic blood pressure all increase.
c. Pulse rate increases while respiration rate and diastolic blood pressure decrease.
d. Pulse rate, respiration rate, and diastolic blood pressure all decrease.

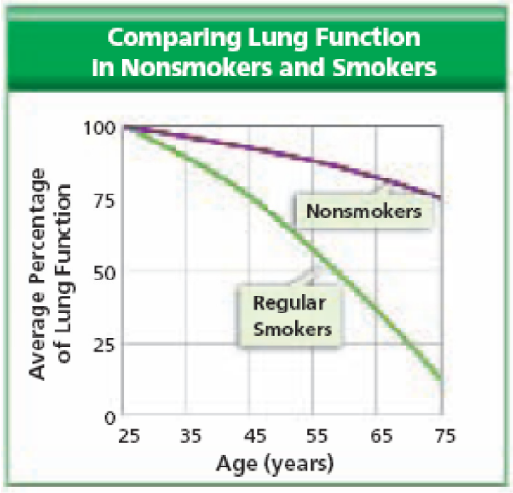
____ 13. Suppose you lie down immediately after you run up the stairs. What would happen to your respiration rate and maximum breath-holding time after 15 minutes?

a. Respiration rate and maximum breath-holding time would both decrease.
b. Respiration rate would decrease, and maximum breath-holding time would increase.
c. Respiration rate and maximum breath-holidng time would both increase.
d. Respiration rate would increase, and maximum breath-holding time would decrease.

____ 14. As you exercise, why does your respiration rate increase?

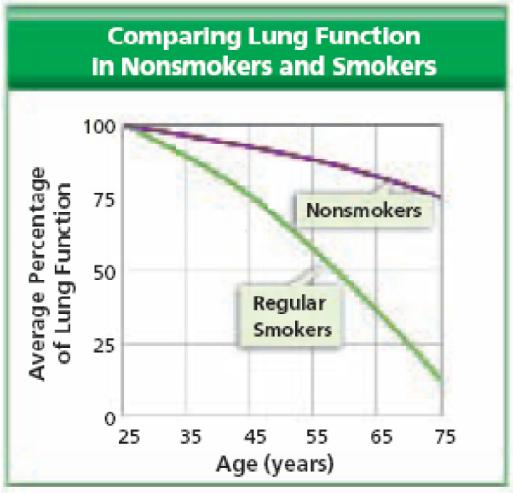
a. More oxygen is needed to keep your temperature down.
b. More oxygen is needed to provide energy for your working muscles.
c. You are sweating and need more water vapor.
d. Your blood pressure is increasing.

____ 15. At approximately what age do the lungs of a smoker have the same capacity as the lungs of a 75-year old who has never smoked?



a. 75
b. 65
c. 45
d. 25

____ 16. What general conclusion about lung function and smoking could you make from this graph?



a. Smoking significantly reduces lung capacity.
b. By the age of 50, a smoker will have 50% lung capacity.
c. People who smoke have better lung function than those who don't smoke.
d. Smoking does not affect lung capacity.

____ 17. How can smoking lead to respiratory diseases such as emphysema?

a. By damaging the diaphragm.
b. By increasing hemoglobin levels
c. By slowing the heart rate.
d. By destroying lung tissue.

____ 18. How does perspiration help maintain homeostasis?

a. It evaporates keeping heat in your body.
b. It evaporates carrying body heat away.
c. It evaporates and eliminates waste from the body
d. .It evaporates carrying extra water away.

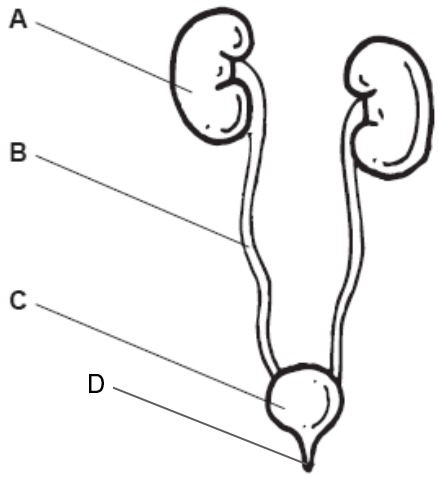
____ 19. What is the main function of the excretory system?

a. To bring oxygen to the body cells.
b. To protect the respiratory system.
c. To fight diseases.
d. To remove wastes from the body.

____ 20. Under normal conditions, which of the following substances is found in urine?

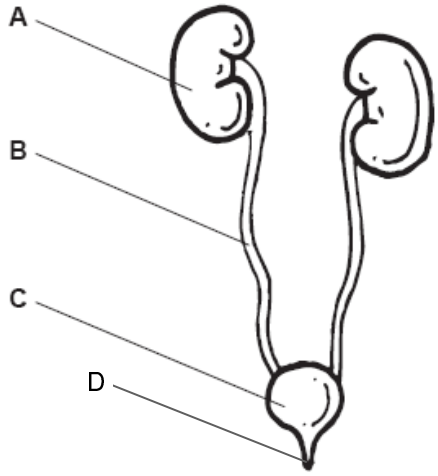
a. Urea
b. Blood cells
c. Glucose
d. Protein

____ 21. Which organ is the kidney?



a. Part B
b. Part C
c. Part D
d. Part A

____ 22. Which organ stores the urine before it leaves the body?



a. Part C
b. Part B
c. Part D
d. Part A

____ 23. Why are the kidneys often compared to “filters”?

a. They remove waste products from the blood.
b. They clean toxins out of the water we drink.
c. They clean particles out of the air we breathe.
d. They remove excess urine from the bladder.

____ 24. Why would a doctor conduct a chemical analysis of a patient's urine?

a. To remove excess waste from the body.
c. To see if the patient has enough oxygen in their blood.
b. To see whether the kidneys are working properly.
d. To determine the health of the digestive system.

____ 25. What is the major source of water loss during normal weather?

Average Daily Water Loss in Humans (mL)

Source	Normal Weather	Hot Weather	Extended Heavy Exercise
Lungs	350	250	650
Urine	1,400	1,200	500
Sweat	450	1,750	5,350
Digestive waste	200	200	200

a. Lungs
c. Sweat
b. Urine
d. Digestive Waste

____ 26. What is the most important reason to drink a lot of water when you are exercising heavily?

a. To replace the extra water you lose in urine.
c. To replace the extra water you lose by sweating.
b. To replace the extra water you lose from breathing hard during exercise.
d. To keep your digestive system working properly.

____ 27. What is the primary way that the excretory system helps maintain homeostasis?

a. It keeps the body free of harmful levels of chemicals by eliminating waste products.
c. It keeps the body's temperature stable by controlling your heart rate.
b. It keeps the body's internal environment stable by conserving as much water as possible.
d. It keeps the proper oxygen levels in your blood by controlling your breathing rate.

____ 28. Your blood is constantly being filtered by the kidneys. Which statement best describes the blood entering and leaving the kidneys?

a. The blood entering the kidneys contains more harmful chemicals than the blood leaving the kidneys.
c. The blood entering the kidneys has less blood pressure than the blood leaving the kidneys.
b. The blood entering the kidneys contains less water than the blood leaving the kidneys.
d. The blood entering the kidneys is cleaner than the blood leaving the kidneys.

____ 29. Kidney disease can occur when the kidneys are damaged and stop working properly. If both kidneys fail, how can a person maintain homeostasis and stay healthy?

a. By carefully managing the diet to make sure harmful chemicals don't build up in the blood.
c. Antibiotics can control bacterial infections to keep the person healthy.
b. The person should increase water intake and maintain urine output.
d. The blood needs to be filtered by a machine in a process called dialysis.

____ 30. People can remain healthy even after one kidney is removed. The other kidney can often keep the blood clean, but usually changes because it is doing the work of two kidneys. Which statement best describes how the remaining kidney may change?

a. It becomes larger, enabling it to filter more blood.
b. It becomes stronger, to push the blood through faster.
c. It becomes smaller and weaker, due to the strain of doing double the work.
d. It clones itself to replace the missing kidney.

____ 31. What are the levels of organization in the body from SMALLEST to LARGEST?

a. Organs - Cells - Organ System - Tissue - Organism
b. Organism - Organ - Organ System - Tissue - Cell
c. Cells - Tissue - Organs - Organ System - Organism
d. Tissue - Organ System - Organs - Cells - Organism

____ 32. What is the process your body uses to keep its internal environment stable regardless of changes outside the body?

a. Healing.
b. Homeostasis.
c. Regeneration.
d. Organization.

____ 33. What is the main function of the digestive system?

a. To obtain oxygen that the body needs for important cell processes.
b. To direct how the body responds to changes inside and outside the body.
c. To obtain nutrients the body needs for energy, growth, and repairing tissues.
d. To eliminate waste products from the body and maintain a stable internal environment.

____ 34. What happens in the small intestine of the digestive system?

a. Mechanical digestion
b. Waste is eliminated
c. Water is absorbed
d. Nutrients are absorbed

____ 35. According to the Food Guide Pyramid, which group should make up the smallest part of the person's diet?

a. Meat, Eggs, Bean
b. Grains, Bread, Cereal
c. Fats, Oil, Sweets
d. Milk, Yogurt, Cheese

____ 36. What is the most important function of the circulatory system?

a. To generate blood pressure so the arteries and veins do not collapse.
b. To provide structural support for the lungs and heart.
c. To transport needed materials to body cells and remove wastes.
d. To obtain nutrients the body needs for growth, and repairing tissues.

____ 37. What is the correct path of blood through the body?

a. Lungs - Rest of Body - Heart
b. Heart - Lungs - Heart - Rest of Body
c. Heart - Lungs - Rest of Body
d. Heart - Rest of Body - Lungs - Heart

____ 38. Where does blood go after the ventricles contract?

a. Into the veins.
b. Out of the heart.
c. Through the septum.
d. Into the heart.

____ 39. What material does the circulatory system transport AWAY from the body's cells?

a. Enzymes
b. Glucose
c. Carbon Dioxide
d. Oxygen

____ 40. Which statement best describes the blood in the aorta?

a. The blood is oxygen-rich.
b. The blood is oxygen-poor.
c. The blood is going to the heart.
d. The blood is going to the lungs.