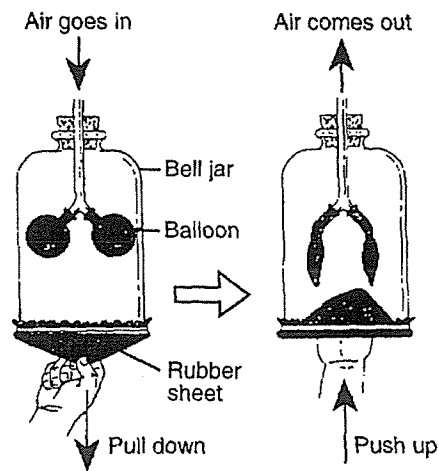


Biology

Respiration & Excretion

- The human trachea is prevented from collapsing by the presence of
 - mucous membranes
 - cartilaginous rings
 - muscle fibers
 - bony networks
- In humans, which structure prevents food from entering the trachea?
 - epiglottis
 - alveolus
 - mucous membrane
 - cartilage ring
- Which statement best describes the human respiratory system?
 - It is composed of a network of moist passageways that permit air to flow from the external environment to the lungs.
 - Each cell of the human body is in direct contact with the external environment, and gas exchange occurs by diffusion.
 - The external body surface is kept moist to allow for gas exchange.
 - Gases diffuse across membranes on both the external and internal surfaces of the body.
- A humidifier is a device that adds moisture to dry air. Which part of the human respiratory system has the same function?
 - nasal cavity
 - epiglottis
 - diaphragm
 - cartilage rings
- When humans exhale, air passes from the trachea directly into the
 - bronchioles
 - alveoli
 - bronchi
 - pharynx

- Which sequence correctly indicates the branching pattern of the human respiratory system?
 - trachea → bronchi → bronchioles → alveoli
 - trachea → bronchioles → bronchi → alveoli
 - alveoli → trachea → bronchioles → bronchi
 - alveoli → bronchioles → trachea → bronchi
- In humans, most gas exchange occurs between the
 - excretory tubules and body cells
 - arteries and body cells
 - skin and air
 - alveoli and capillaries
- The diagram below represents a demonstration of the breathing process in humans. The balloons represent lungs.

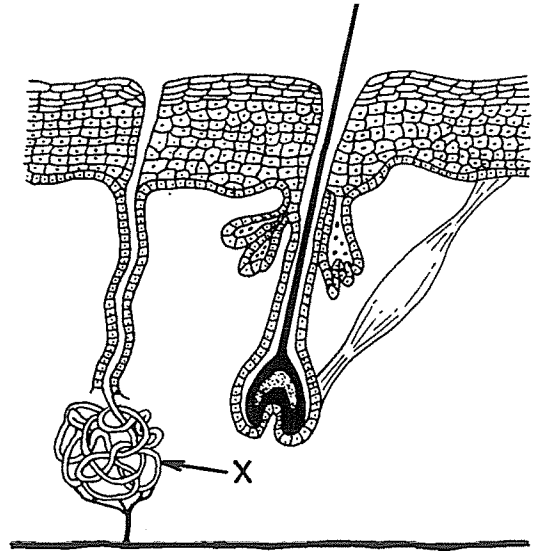


The change in the balloons is brought about by

- a change in air composition outside the bell jar
- a change in air pressure inside the bell jar
- an expansion of the balloons, which pulls the rubber sheet into the bell jar
- a contraction of the balloons, which forces air into the bell jar

9. Random separation and distribution of homologous chromosomes occurs during
- (1) cleavage
 - (2) mitotic cell division
 - (3) fertilization
 - (4) meiotic cell division
10. One type of allergic reaction results in constriction of the bronchial tubes, which interferes with the passage of air into and out of the lungs. This type of allergic reaction is most closely associated with
- (1) asthma
 - (2) emphysema
 - (3) bronchitis
 - (4) meningitis
11. Smoking may damage the respiratory system because deposits from the smoke can
- (1) interfere with ciliary action in the trachea
 - (2) trigger the release of antigens by the alveoli
 - (3) block the transmission of impulses that regulate breathing
 - (4) lower blood pressure in the mucous membranes of the bronchioles
12. A condition in humans that is characterized by enlargement and degeneration of the alveoli, resulting in decreased lung capacity, is known as
- (1) goiter
 - (2) bronchitis
 - (3) arthritis
 - (4) emphysema
13. In man, which organ excretes water and dissolved salts
- (1) lungs
 - (2) skin
 - (3) thyroid gland
 - (4) small intestine

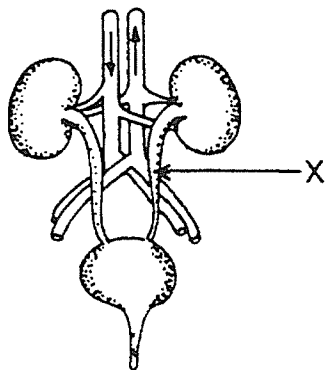
14. The diagram below shows a section of human skin.



Structure X represents a

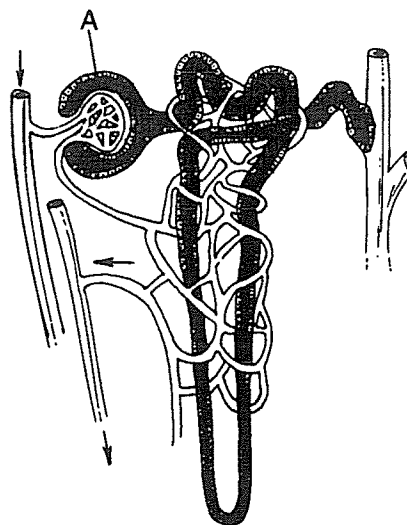
- (1) nephron
 - (2) nephridium
 - (3) sweat gland
 - (4) Malpighian tubule
15. Which human excretory structure aids in the maintenance of normal body temperature?
- (1) sweat gland
 - (2) nephron
 - (3) liver
 - (4) urinary bladder
16. In humans, the organ that most directly regulates the concentration of water in the blood is the
- (1) heart
 - (2) liver
 - (3) pancreas
 - (4) kidney
17. Which sequence represents the correct pathway for the removal of urine from the human body?
- (1) kidney → ureter → urinary bladder → urethra
 - (2) kidney → urethra → urinary bladder → ureter
 - (3) ureter → kidney → urinary bladder → urethra
 - (4) urethra → kidney → urinary bladder → ureter

18. A major function of the human urinary bladder is
- (1) transforming urine into a nitrogenous waste
 - (2) releasing urine directly into the bloodstream
 - (3) storing urine until it is eliminated
 - (4) filtering urine out of the blood
19. Urine is periodically excreted from the urinary bladder through a structure known as the
- (1) urethra
 - (2) ureter
 - (3) uterus
 - (4) kidney
20. In the diagram below, which structure is indicated by the letter X?



- (1) ureter
- (2) artery
- (3) urinary bladder
- (4) urethra

21. The diagram below represents a nephron.



Which process takes place in region A?

- (1) Proteins are converted to urea.
 - (2) Substances are filtered out of the glomerulus.
 - (3) Urine is stored temporarily.
 - (4) Water is reabsorbed into the blood.
22. The nephron is the structural unit of the human
- (1) lung
 - (2) liver
 - (3) kidney
 - (4) intestine
23. What is the main function of a nephron?
- (1) It breaks down red blood cells to form nitrogenous wastes.
 - (2) It regulates the chemical composition of the blood.
 - (3) It forms urea from the waste products of protein metabolism.
 - (4) It absorbs digested food from the contents of the small intestine.

Name _____

Class _____

Date _____

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**Biology Chapter 11
Respiration Quiz**

1. _____ The membrane through which gas exchange take place in an organism.

2. _____ The network of tubes found inside a grasshopper for breathing.

3. _____ The two layer membrane that surrounds the lungs in humans.

4. _____ The muscle that separates the lungs from the abdominal cavity and allows us to breathe.

5. _____ The process of bring air into your lungs.

6. _____ Microscopic cavities in the lungs, they are the actual site of gas exchange in humans.

7. _____ The chemical in the blood that carries the oxygen to the tissues.

8. _____ The gas exchange organ in fish.

9. _____ The smallest tubes that bring air into the lungs.