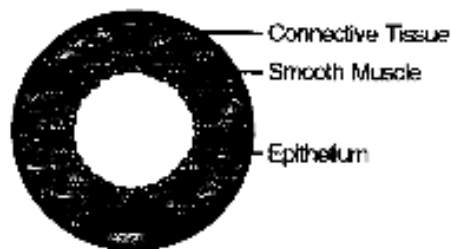


Circulatory/Respiratory Systems Practice Test

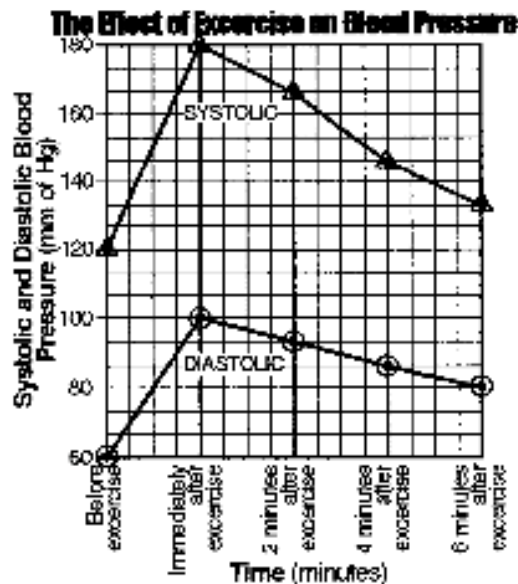
- Cells of the human body are surrounded by intercellular fluid (ICF), which is derived from
 - hemoglobin
 - white blood cells
 - nitrogenous wastes
 - blood plasma
- The exchange of materials between the blood and the intercellular fluid (ICF) occurs readily through structures known as
 - villi
 - arteries
 - capillaries
 - veins
- The breaking apart of platelets in the blood helps in the
 - synthesis of hemoglobin
 - formation of a clot
 - deamination of amino acids
 - release of antibodies
- Dissolved nutrients, wastes, and oxygen are exchanged between the blood and intercellular fluid through the walls of
 - veins
 - arteries
 - ventricles
 - capillaries
- Which statement accurately describes human capillaries?
 - They filter bacteria out of the blood.
 - They have walls one cell thick.
 - They have valves to prevent backflow of blood.
 - They contract to assist blood flow.
- Blood normally flows from the capillaries directly into
 - heart atria
 - small veins
 - small arteries
 - lymph vessels
- Muscular vessels that transport blood directly from the heart throughout the body are known as
 - veins
 - lacteals
 - arteries
 - capillaries
- Which structure is best illustrated by the diagram below?



- a lymph vessel
 - a heart ventricle
 - a capillary
 - an artery
- In humans, excess fluid and other substances surrounding the cells are returned to the blood by
 - lymphocytes
 - arteries
 - platelets
 - lymph vessels

Circulatory/Respiratory Systems Practice Test

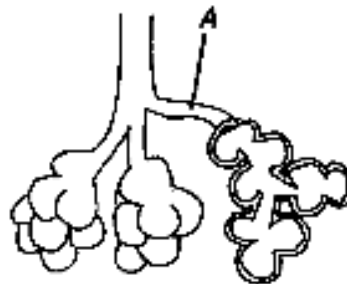
- 10) Students performed an investigation to determine the effect of exercise and rest on systolic and diastolic blood pressure. The graph below represents one student's results for this experiment.



- What change in blood pressure occurs during the rest period after exercise?
- A) Systolic pressure increases, only.
B) Diastolic pressure increases, only.
C) Both diastolic and systolic pressures increase, then decrease.
D) Both systolic and diastolic pressures decrease.
- 11) Which statement best describes the function of the respiratory passageways of a human?
- A) They regulate the amount of ammonia and salt dissolved in body fluids.
B) They permit exchange between the external atmosphere and the circulatory system.
C) They permit digestive end-products to make contact with body cells.
D) They transport gaseous cellular wastes from body cells to the lungs for excretion.
- 12) In humans, what happens when the breathing rate increases?
- A) Additional carbon dioxide will diffuse into the blood as oxygen diffuses out of the blood in the lungs.
B) Oxygen from body cells will diffuse more rapidly into red blood cells.
C) Additional oxygen will diffuse into the blood as carbon dioxide diffuses out of the blood in the lungs.
D) Increased oxygen dissolved in the blood will stimulate the cerebrum to slow the breathing rate.
- 13) Which sequence represents the direction of flow of carbon dioxide as it passes out of the respiratory system into the external environment?
- A) alveoli → pharynx → trachea → bronchioles → bronchi → nasal cavity
B) alveoli → bronchioles → bronchi → trachea → pharynx → nasal cavity
C) alveoli → bronchi → pharynx → bronchioles → trachea → nasal cavity
D) alveoli → trachea → bronchioles → bronchi → pharynx → nasal cavity

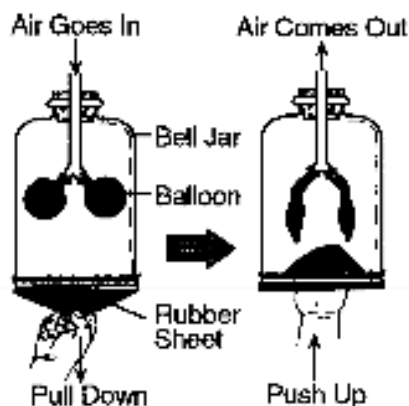
Circulatory/Respiratory Systems Practice Test

- 14) Which adaptation found within the human respiratory system filters, warms, and moistens the air before it enters the lungs?
- A) clusters of alveoli
B) involuntary smooth muscle
C) ciliated mucous membranes
D) rings of cartilage
- 15) Which part of the human respiratory system is correctly paired with a description of its structure?
- A) bronchiole—small branching tubule lacking cartilaginous rings
B) alveolus—microscopic sac containing rings of cartilage and ciliated membranes
C) trachea—thin, moist membrane surrounded by capillaries
D) pharynx—cavity lined with flagellated mucous membranes
- 16) A portion of the human respiratory tract is represented in the diagram below.



Which structure is indicated by letter A?

- A) alveolus B) pharynx C) bronchiole D) trachea
- 17) 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) an expansion of the balloons, which pulls the rubber sheet into the bell jar
B) a contraction of the balloons, which forces air into the bell jar
C) a change in air composition outside the bell jar
D) a change in air pressure inside the bell jar

Circulatory/Respiratory Systems Practice Test

18) Diagrams *A* and *B* below represent structures found in the human body.

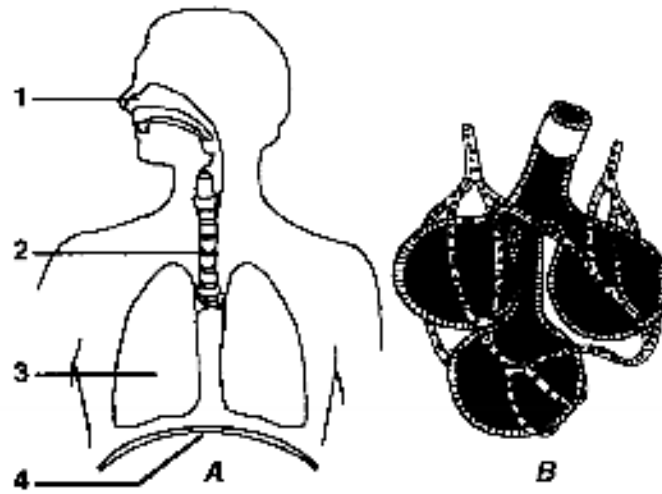


Diagram *B* represents the functional unit of which structure represented in diagram *A*?

A) 1

B) 2

C) 3

D) 4

Circulatory/Respiratory Systems Practice Test

- 1) D
- 2) C
- 3) B
- 4) D
- 5) B
- 6) B
- 7) C
- 8) D
- 9) D
- 10) D
- 11) B
- 12) C
- 13) B
- 14) C
- 15) A
- 16) C
- 17) D
- 18) C