



Respiratory System

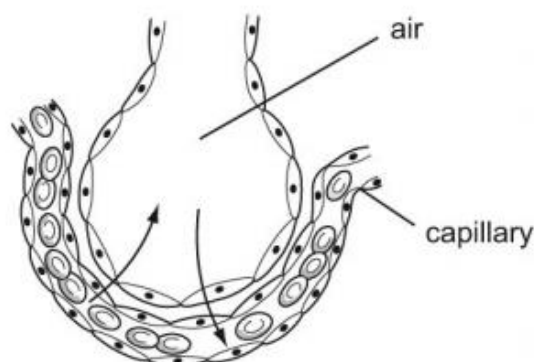
2009

- 13 Which one of the following movements will be severely and immediately disrupted if the oxygen concentration in the blood becomes very low?
- A carbon dioxide from the blood into the alveoli
 - B glucose from the lumen of the intestine into the villi
 - C oxygen from the alveoli into the blood
 - D urea from the blood plasma into the nephron
 - E water from the blood plasma into muscle cells
 - F water from the blood plasma into the nephron



Respiratory System

- 21 The diagram shows a section through an alveolus. Gases diffuse through the alveolar and capillary walls.



Which row explains why gaseous exchange occurs in the alveolus?

	Concentration of:			
	oxygen in alveolus	oxygen in capillary	carbon dioxide in alveolus	carbon dioxide in capillary
A	high	low	high	low
B	low	high	low	high
C	high	high	high	low
D	high	low	low	high
E	low	high	high	low
F	low	low	low	high


Respiratory System

2011

- 13** The table below shows information relating to gas exchange in an active muscle when blood first enters that muscle.

Which row of the table is correct?

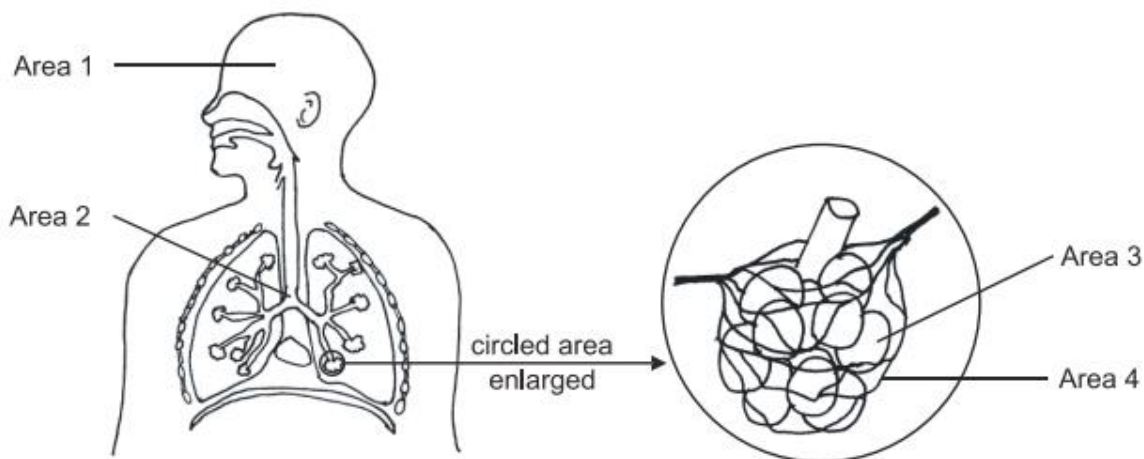
	concentration of carbon dioxide in the plasma	oxygen concentration in red blood cells	process of gas exchange	oxygen concentration in muscle cells	concentration of carbon dioxide in muscle cells
A	high	low	diffusion	high	low
B	high	low	osmosis	high	low
C	high	low	osmosis	low	high
D	low	high	diffusion	high	low
E	low	high	diffusion	low	high
F	low	high	osmosis	low	high



Respiratory System

2012

5 The diagrams below show part of the breathing apparatus of a human.



Which row of the table correctly identifies the locations affected by two chemicals found in cigarettes and by two diseases associated with smoking?

	Location affected			
	1	2	3	4
A	Carbon monoxide	Bronchitis	Nicotine	Emphysema
B	Nicotine	Bronchitis	Emphysema	Carbon monoxide
C	Carbon monoxide	Nicotine	Bronchitis	Emphysema
D	Nicotine	Emphysema	Bronchitis	Carbon monoxide
E	Bronchitis	Carbon monoxide	Emphysema	Nicotine
F	Bronchitis	Emphysema	Carbon monoxide	Nicotine



Respiratory System

 2015

- 5 Which row identifies what is occurring during anaerobic respiration in animal cells?

	<i>Carbon dioxide formed</i>	<i>Oxygen used</i>	<i>Water formed</i>
A	no	no	no
B	no	no	yes
C	no	yes	no
D	no	yes	yes
E	yes	no	no
F	yes	no	yes
G	yes	yes	no
H	yes	yes	yes



2016

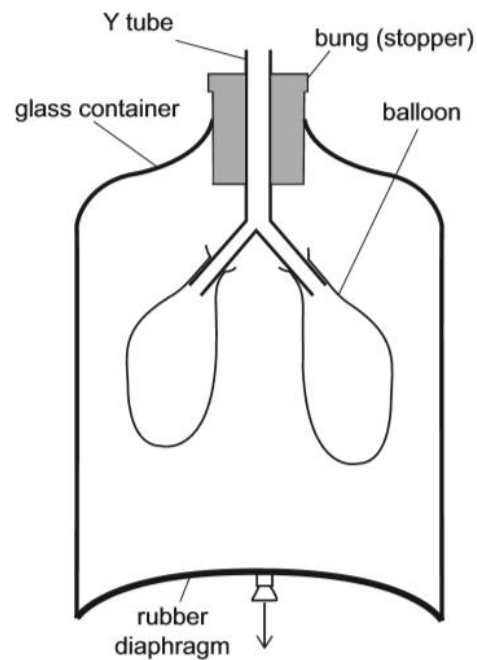
- 13 Which of the following molecules are involved in **both** aerobic and anaerobic respiration in a healthy human?
- 1 carbon dioxide
 - 2 glucose
 - 3 lactic acid
- A 1 only
- B 2 only
- C 1 and 2 only
- D 1 and 3 only
- E 2 and 3 only
- F 1, 2 and 3



Respiratory System

2018

- 17 The diagram shows a simple piece of apparatus that can be used to demonstrate some of the events involved in human ventilation.



Which events occurring during ventilation will be demonstrated by pulling the rubber diaphragm downwards, as shown by the arrow?

- 1 diaphragm relaxes
- 2 diaphragm contracts
- 3 volume of thorax increases
- 4 volume of thorax decreases
- 5 pressure in thorax increases



Respiratory System

- A** 1, 3, 5
- B** 1, 3, 6
- C** 1, 4, 5
- D** 1, 4, 6
- E** 2, 3, 5
- F** 2, 3, 6
- G** 2, 4, 5
- H** 2, 4, 6

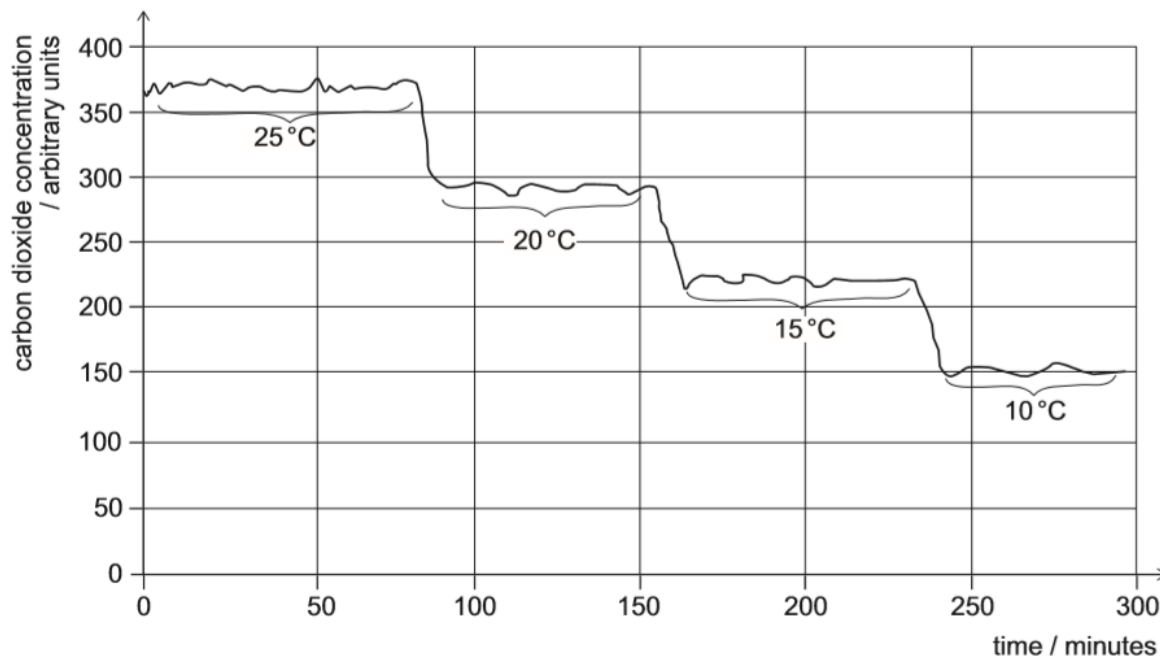


Respiratory System

2019

- 9 A lizard was placed in a chamber with a constant flow of air. The temperature of the chamber was varied between 25 °C and 10 °C. Apart from temperature and time, all other variables were kept constant.

The carbon dioxide concentrations in the air leaving the chamber are shown in the graph.



Which of the following statements is/are correct?

- 1 Between 25 °C and 10 °C the respiration rate of the lizard is inversely proportional to the environmental temperature.
- 2 The data demonstrates that the lizard is only respiring aerobically.
- 3 The carbon dioxide could be detected by passing the air leaving the chamber through limewater.



Respiratory System

- A** none of them
- B** 1 only
- C** 2 only
- D** 3 only
- E** 1 and 2 only
- F** 1 and 3 only
- G** 2 and 3 only
- H** 1, 2 and 3