

1	The speed at which substances can diffuse in and out of a cell is dependent on:
A	Size of cell
B	Amount of substance
C	Cell surface area
D	Type of substance

2	The amount of substance needed by a cell is dependent on:
A	Nucleus of cell
B	Cell membrane
C	Cell volume
D	Cell colour

3	What is meant by the term “gas exchange”?
A	The release of waste gases (Flatulence)
B	The addition of oxygen to the blood and the removal of carbon dioxide
C	The mixing of gasses
D	All of the above

4	Where does gas exchange take place?
A	In the nose
B	In the mouth
C	In the alveoli of the lungs.
D	In the trachea

5	How does the structure of the alveoli make gas exchange efficient?
A	The thin walls of the alveoli and the capillaries give only a small distance for the oxygen and carbon dioxide to diffuse across
B	Alveoli have their own supply of Oxygen and Carbon Dioxide
C	Alveoli are dry so that oxygen and carbon dioxide to diffuse across easier
D	Alveoli are huge in size

6	List the structures that air passes on its way from the nose to the alveoli:
A	Nasal cavity, pharynx, epidermis, bronchi and bronchioles
B	Mouth, epidermis, glottis and alveoli
C	Nasal cavity, pharynx, larynx, trachea, bronchi and bronchioles
D	Mouth, nasal cavity, glottis, bronchi and bronchioles

7	What is the function of the mucus and cilia lining the respiratory passages?
A	The mucus and cilia in the respiratory passages trap dust particles and transport them to the mouth and nose for expulsion.
B	To keep respiratory passages moist
C	They humidify the incoming air
D	They remove all traces of CO ₂ from incoming air

8	How do movements of the ribs and diaphragm bring about inspiration?
A	The diaphragm contracts and ribs move down and inwards
B	The diaphragm contracts and ribs move up and outwards
C	The diaphragm flattens and ribs move up and outwards
D	The diaphragm flattens and ribs move down and inwards

9	What controls the rate of breathing?
A	The diaphragm
B	The lungs
C	The heart beat
D	The concentration of carbon dioxide in the blood

10	Which of the following statements is the best definition of diffusion?
A	When something dissolves in the blood
B	Diffusion occurs when molecules move from an area of high concentration (of that molecule) to an area of low concentration
C	Molecules spreading out randomly
D	Diffusion occurs when molecules move from an area of low concentration (of that molecule) to an area of high concentration

11	Which feature do both alveoli and capillaries share which aids gas exchange?
A	Both have pores between cells
B	Walls which are only one cell thick
C	Both are located in the lungs
D	Both are big in over-all size

12	Why does carbon dioxide pass out of the blood supply when it reaches the alveoli?
A	Because the returning blood has a higher concentration of carbon dioxide than the inspired air in the lungs
B	Alveoli have a low affinity for carbon dioxide
C	Alveoli contract to expel carbon dioxide
D	Alveoli contain tiny pores that selectively allow carbon dioxide to pass out

13	How much oxygen is in the air we breathe in and the air we breathe out?
A	Approximately 27% in the air we breathe in and 10% in the air we breathe out
B	Approximately 50% in the air we breathe in and 25% in the air we breathe out
C	100% in the air we breathe in and 0% in the air we breathe out
D	Approximately 21% in the air we breathe in and 17% in the air we breathe out

14	The exchange of gases between blood and cells is called
A	Pulmonary ventilation.
B	Internal respiration
C	External respiration
D	Cellular respiration

15	Which of the following does NOT belong to the conducting portion of the respiratory system?
A	Alveoli
B	Bronchioles
C	Pharynx
D	Nose

16	Which of the following describes a correct order of structures in the respiratory passageways?
A	Pharynx, trachea, larynx, bronchi, bronchioles
B	Larynx, pharynx, trachea, bronchioles, bronchi
C	Trachea, pharynx, larynx, bronchi, bronchioles
D	Pharynx, larynx, trachea, bronchi, bronchioles

17	The volume of air that can be exhaled after normal exhalation is the
A	Tidal volume
B	Residual volume
C	Inspiratory reserve volume

D	Expiratory reserve volume
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18	The volume of air in a normal breath is called
A	Total lung capacity
B	Vital capacity
C	Tidal volume
D	Residual volume

19	Most oxygen in the blood is transported
A	As gas dissolved in plasma
B	As oxy-haemoglobin
C	As carboxy-haemoglobin
D	As bicarbonate

20	The primary chemical stimulus for breathing is the concentration of
A	Carbon monoxide in the blood
B	Carbon dioxide in the blood
C	Oxygen in the blood
D	Carbonic acid in the blood

21	Which of the following is NOT a characteristic of alveoli
A	They have a thin muscular wall to aid breathing
B	They have a moist lining
C	The walls are only one cell thick
D	They are covered in a dense network of capillaries