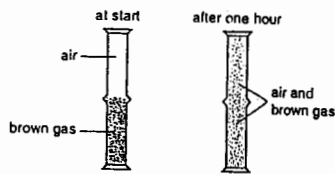


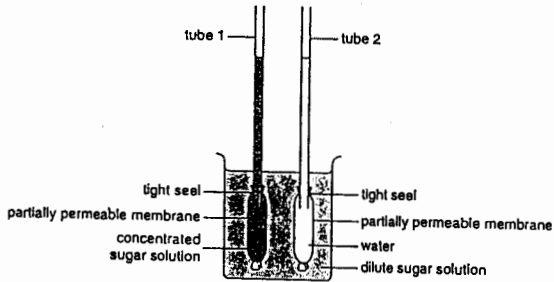
1. A jar of air was placed upside down on top of a jar of brown gas as shown.



Which process has taken place?

- A absorption
- B diffusion
- C evaporation
- D osmosis

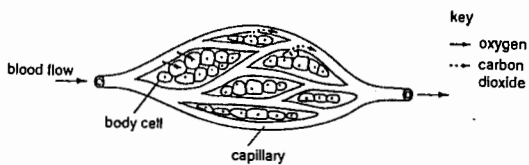
2. The diagram shows apparatus set up to demonstrate osmosis.



What happens to the liquid levels in the tubes after one hour?

- | tube 1 | tube 2 |
|-------------|-----------|
| A falls | risers |
| B no change | risers |
| C rises | falls |
| D rises | no change |

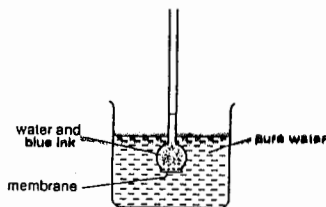
3. The arrows in the diagram show the movement of dissolved substances between the blood in capillaries and body cells.



By which process does this movement occur?

- A diffusion
- B excretion
- C osmosis
- D respiration

4. The apparatus was set up as shown.



Some hours later, the water in the beaker had turned blue.

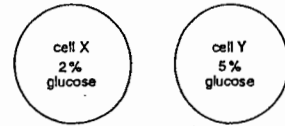
Which process caused this colour change?

- A absorption
- B assimilation
- C diffusion
- D osmosis

5. By which process does oxygen pass from the alveoli of the lungs into the blood?

- A diffusion
- B osmosis
- C respiration
- D transpiration

6. The diagram shows the concentrations of glucose in two cells X and Y.

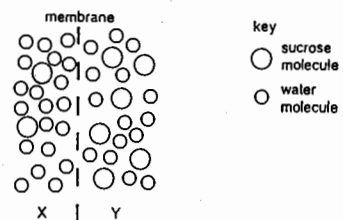


If cell X and cell Y come into contact, the concentration of glucose in each cell begins to change.

When will there be no further change?

- A when cell X and cell Y have the same glucose concentration
- B when cell X has a higher glucose concentration than cell Y
- C when all the glucose is in cell X
- D when all the glucose is in cell Y

7. The diagram shows two liquids, X and Y, separated by a partially permeable membrane.



Which sentence describes the greatest movement of molecules during osmosis?

- A Sucrose molecules will move from X to Y.
- B Sucrose molecules will move from Y to X.
- C Water molecules will move from X to Y.
- D Water molecules will move from Y to X.

8. Which structure is adapted for the diffusion of gases?

- A alveolus
- B diaphragm
- C oesophagus
- D trachea

9. The diagrams show a cell before and after it was placed in a concentrated salt solution.



Why did the cell change shape?

- A Salt solution entered the cell.
- B The cell membrane burst.
- C Water entered the cell by osmosis.
- D Water moved out of the cell.

10. Osmosis in living organisms is movement across a partially permeable membrane.

Which correctly describes this movement?

- A solute molecules from a concentrated solution to a dilute solution
- B solute molecules from a dilute solution to a concentrated solution
- C water molecules from a concentrated solution to a dilute solution
- D water molecules from a dilute solution to a concentrated solution

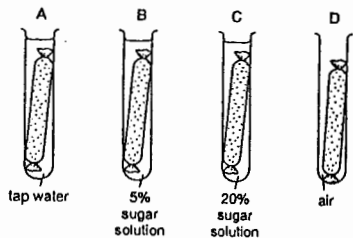
11. The scent from a bunch of flowers soon spreads throughout a room.

By what method does the scent spread?

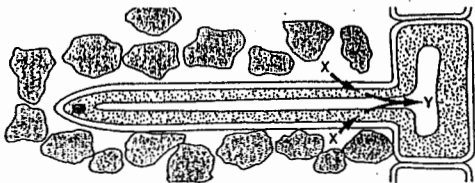
- A diffusion
- B osmosis
- C radiation
- D transpiration

12. The diagram shows four identical pieces of tubing made from a partially permeable membrane. The pieces of tubing were filled with 5% sugar solution and left as shown for six hours.

Which piece of tubing showed an increase in volume?



13. The arrows in the diagram show the diffusion of oxygen into a root hair cell from X to Y.



What causes this diffusion of oxygen?

- A a higher concentration of carbon dioxide at X than at Y
 B a lower concentration of carbon dioxide at X than at Y
 C a higher concentration of oxygen at X than at Y
 D a lower concentration of oxygen at X than at Y

14. By which process does oxygen pass out of a leaf?

- A diffusion
 B egestion
 C translocation
 D transpiration

15. Which substance passes through a membrane by osmosis?

- A cell sap
 B mineral salts
 C oxygen
 D water

16. By which process do oxygen molecules move down a concentration gradient?

- A breathing
 B diffusion
 C osmosis
 D respiration