

<b>1</b>	<b>Which of the following best describes a cell membrane?</b>
<b>A</b>	A phospholipid layer
<b>B</b>	<b>A phospholipid bilayer</b>
<b>C</b>	A cell wall
<b>D</b>	A layer of polysaccharides

<b>2</b>	<b>Floating around in the cell membrane are different kinds of proteins. Generally these proteins functionally fall into three categories, which are:</b>
<b>A</b>	Carrier proteins, glycoproteins, carbohydrates
<b>B</b>	Cholesterol, glycoproteins, carbohydrates
<b>C</b>	<b>Carrier proteins, marker proteins and receptor proteins</b>
<b>D</b>	Carrier proteins, receptor proteins, cholesterol

<b>3</b>	<b>Which of the following statements is true?</b>
<b>A</b>	Phospholipid molecules are completely hydrophobic
<b>B</b>	<b>Plasma membranes are partially permeable barriers</b>
<b>C</b>	Phospholipid molecules are completely hydrophilic
<b>D</b>	Plasma membranes are not permeable

<b>4</b>	<b>Which of the following components is not part of the cell membrane?</b>
<b>A</b>	Phospholipid
<b>B</b>	<b>Deoxyribose sugar</b>
<b>C</b>	Protein
<b>D</b>	Cholesterol

<b>5</b>	<b>The average width of the membrane is</b>
<b>A</b>	<b>7nm</b>
<b>B</b>	17nm
<b>C</b>	7µm
<b>D</b>	17µm

<b>6</b>	<b>Which is the correct answer? Diffusion is</b>
<b>A</b>	An active process
<b>B</b>	Inhibited by metabolic poisons
<b>C</b>	<b>A passive process</b>
<b>D</b>	Movement against a concentration gradient

7	<b>Does the surface area affect diffusion across membranes?</b>
A	Yes
B	No

8	<b>Does the difference in concentration on either side of the membrane affect diffusion across membranes?</b>
A	Yes
B	No

9	<b>Does the thickness of the membrane affect diffusion across membranes?</b>
A	Yes
B	No

10	<b>Does the size and type of molecule on either side of the membrane affect diffusion across membranes?</b>
A	Yes
B	No

11	<b>Does the temperature on either side of the membrane affect diffusion across membranes?</b>
A	Yes
B	No

12	<b>Which of the following equations defines the relationship between environmental factors (e.g. concentration gradient, surface area, temperature) and diffusion?</b>
A	Starling's Law
B	Graham's Law
C	Fick's Law
D	Boyle's Law

13	<b>In which ways are facilitated diffusion and simple diffusion similar? Both ...</b>
A	Require energy
B	Require protein carriers
C	Move substances from low to high concentration
D	Move substances from high to low concentration

14	<b>Smokers cough a lot and this breaks down some of the folds in the alveoli. How might this affect them?</b>
A	They get a better high from the smoke
B	They produce more phlegm

<b>C</b>	Less oxygen enters the blood
<b>D</b>	They may get cancer

<b>15</b>	<b>Do both facilitated diffusion and active transport require energy for movement of molecules?</b>
<b>A</b>	Yes
<b>B</b>	No

<b>16</b>	<b>Which of the following statements applies to the process of osmosis?</b> <b>A) Movement of water through a selectively permeable membrane.</b> <b>B) Movement of water from an area of higher water potential to an area of lower water potential.</b> <b>C) In concentrated solutions water has more kinetic energy and is more likely to hit the membrane</b> <b>D) In dilute solutions, water is more free to move as fewer solutes means less attraction to water molecules.</b> <b>E) In concentrated solutions water is more free to move as fewer solutes are attracting them.</b>
<b>A</b>	B and C only
<b>B</b>	A and E only
<b>C</b>	A, B and D
<b>D</b>	B and E only

<b>17</b>	<b>Which of the following refers to endocytosis?</b> <b>A) Involves the taking of substances out of the cell</b> <b>B) The cell membrane invaginates round the substance outside the cell to form a vacuole</b> <b>C) Phagocytosis and pinocytosis are two forms of endocytosis</b> <b>D) Is due to the fluid nature of the membrane</b>
<b>A</b>	A and B
<b>B</b>	A and C
<b>C</b>	B and D
<b>D</b>	A and D

<b>18</b>	<b>One function of receptor sites is to</b>
<b>A</b>	Transport molecules across membranes avoiding the hydrophobic centre
<b>B</b>	Initiate reactions
<b>C</b>	Speed up reactions
<b>D</b>	Destroy foreign material

19	<b>When a cell is surrounded by a solution. The term hypotonic refers to a solute concentration that:</b>
A	Is of a lower concentration than the cell cytoplasm
B	Is of a higher concentration than the cell cytoplasm
C	Is the same concentration as the cell cytoplasm
D	gives no water potential

20	<b>When a cell is surrounded by a solution. The term hypertonic refers to a solute concentration that:</b>
A	Is of a lower concentration than the cell cytoplasm
B	Is of a higher concentration than the cell cytoplasm
C	Is the same concentration as the cell cytoplasm
D	gives no water potential

21	<b>When a cell is surrounded by a solution. The term isotonic refers to a solute concentration that:</b>
A	Is of a lower concentration than the cell cytoplasm
B	Is of a higher concentration than the cell cytoplasm
C	Is the same concentration as the cell cytoplasm
D	Causes cell lysis

22	<b>What is the water potential of a hypotonic solution?</b>
A	Same as the cell cytoplasm
B	Lower than the cell cytoplasm
C	There is no water potential cytoplasm
D	Higher than cell cytoplasm

23	<b>What is the water potential of a hypertonic solution?</b>
A	Same as the cell cytoplasm
B	Higher than the cell cytoplasm
C	Lower than cell cytoplasm
D	There is no water potential cytoplasm

24	<b>What is the water potential of an isotonic solution?</b>
A	There is no water potential cytoplasm
B	Lower than the cell cytoplasm
C	Higher than the cell cytoplasm
D	Same as the cell cytoplasm

25	<b>What is the direction of water when a cell is placed in a hypotonic solution?</b>
A	Out of the cell
B	Into the cell
C	No net movement

26	<b>What is the direction of water when a cell is placed in a hypertonic solution?</b>
A	Into the cell
B	Out of the cell
C	No net movement

27	<b>What is the direction of water when a cell is placed in an isotonic solution?</b>
A	No net movement
B	Out of the cell
C	Into the cell

16	<b>Which of the following statements is a true definition of osmosis?</b>
A	Osmosis is the passive movement molecules from a region of low concentration to a region of high concentration
B	Osmosis is the movement of water molecules from a region of lower solute concentration to a region of higher solute concentration, that requires ATP
C	Osmosis is the passive movement of water molecules from a region of lower solute concentration to a region of higher solute concentration, across a partially permeable membrane
D	Osmosis is the passive movement of water molecules from a region of higher solute concentration to a region of lower solute concentration, across a partially permeable membrane