

SAMPLE ANSWERS

2.

Diffusion – random particle movement spreads particles out from areas of high to low concentration in attempt to reach equilibrium: diffusion of water from intestines into blood stream

Facilitated diffusion – random particle movement drives the process, but particles need “help” in the form of transport proteins or channels to cross the cell membrane: movement of ions (charged particles) across the cell membrane

Active transport – energy required to move particles from areas of low to high concentration or move very large particles across membranes from area of high to low concentrations: movement of glucose into cells

3.

Concentration gradient is when there is a difference of concentration of a solute in a solution/in different areas.

Equilibrium is when there is an equal distribution of solute in a solution/area.

4. Put it in a glass of water. The cells in the celery are hypertonic to the water, so water will move into the celery cells.

5.

Passive transport does not need energy – just particle movement, to move particles from areas of high to low concentrations.

Active transport needs energy to move particles against concentration gradient – from area of low to high concentrations.

7,

A – Cell would shrink because water would move out of the cell into the solution which has more solute in it.

B – Cell would get larger because water would move into the cell where there are more solutes in effort to reach equilibrium.

C – Cell would remain the same size as the same amount of water moves into and out of cell as it is in equilibrium with the solution.

8.

Excess solute outside of cell draws water out of organisms like bacteria & mold so they cannot grow or survived.