Chapter 2

Allie Marut

1. What holds ions together?

2. How can an atom be changed into an ion?

3. What's a polar molecule?

4. How are some solutions nuetral?

5. What do buffers do? and what is their purpose?

Answers

1. Ionic bonds hold ions together

2. By adding or removing electrons.

3. A molecule containg polar covalent bonds, (having opposite charges on opposite ends)

4. They do contain H^+ and OH^-, but the concentration of the two ions are equal. The pH is 7

5. Buffers accept H^+ when an ion is in excess and donating H^+ when it is depleted. They prevent harmful changes in pH.

Sara Baker

Chapter 4

1. Differences between rough ER & smooth ER.
2. Golgi apparatus?
3. How are vacuole's a big part of a cell?
4. what are cilia and flagella?
5. What are microtubules?

1. -rough ER, roughness is due to ribosomes that stud the outside of the ER membrane.
   -smooth ER, lacks the ribosomes that populate the surface of rough ER. the diversity of enzymes built into the smooth ER membrane enables this organelle to preform many functions.
2. golgi apparatus, recieves, refines, stores, and distributes chemical products of the cell.
3. vacuoles pump out excess water or store nutrients
4. Cilia and flagella are motile appendages - extensions from a cell that aid in locomotion. flagella propel the cell by an undulating whiplike motion. Cilia are shorter & numerous compared to the flagella. They promote movement by a coordinated back & forth motion.
5. Microtubules is one of the most important fibers. They are straight, hollow tubes composed of globular proteins called tubulins.

Sara Baker

Chapter 5

1. how do enzymes work?
2. Explain the ATP cycle
3. enzyme inhibitors?
4. explain what exocytosis and endocytosis is?
5. what is active transport?

1. Enzymes speed up chemical reactions. It speeds the process by lowering the barrier of activation energy.
2. _____
3. They're substrate imposters that plug up the active site. The binding changes the shape of the enzyme.
4. <u>exocytosis</u> is when plasma membrane forms around water or small solutes and brings it to the outside of the cell. <u>endocytosis</u> is a reverse process where it takes material into the cell within vesicles that bud inward from the plasma membrane.
5. Active transport is when a protein pumps a solute against the solutes concentration and toward the side where it is more concentrated.

Chapter 6

Allie Mauk

Questions

1. What other molecules can be fuel for cellular respiration besides glucose?

2. Where does NAD^+ come from?

3. In respiration, why is the fall of electrons in steps?

4. Explain the relationship between metabolism and cellular respiration.

5. What causes the fall and energy release during cellular respiration?

Answers

1. Polysaccharides, Fats, Proteins, Sugars, Glycerol, Fatty acids, Amino acids

2. When it drops off in electrons in electron transport, it is recycled and become NAD^+ again.

3. To release more overall ATP

4. Cellular respiration is a metabolic pathway.

Alexis Holmes

Chapter 7

1. How do the electrons get into the first photosystem?
   A: the water molecule is split inside the plant

2. Is a photon a measurement of light?
   A: yes, it is a unit of measure for a piece of light

3. How do different wavelengths of light affect photosynthesis?
   A: Some wavelengths of light are reflected off plants and not used, while some are absorbed. The colors reflected are violet-red and red and blue and green. the absorbed light is necessary to carry out photosynthesis

4. Is flourescent light always on or off when an electron goes from an excited state to the ground state?
   A: Heat can be given off light, or both.

5. What is a pigment or a receptor made of?
   A: a modified carotenoid molecule

Alexis Rivera

Chapter 10

1. What's the difference between DNA and RNA polymerase?
   A: They work in two different processes and are completely different enzymes.

2. What holds together the sugar-phosphate backbone?
   A: covalent bonds

3. What causes the double helix to twist?
   A: hydrogen bonds.

4. How does complementary base pairing make DNA replication possible?
   A: when the helix separates, each side becomes a template

5. What are the bases not between the start and stop codons used for?
   A: not really anything, "like garbage"