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Steven Hernandez Chapter 2 questions

1- What are the major differences between the three types of atomic bonds? Ionic bonds -> transfer electrons from less to >. Covalent bonds -> share electrons to form [redacted] compounds *

2- What property of water allows it to have such a high surface tension? High cohesion levels.

3- How can water dissolve other polar molecules? By separating [redacted] + and - molecules that are attracted to certain sections of the water molecule

4- Why is it so imperative that we keep buffers in our bloodstream? To regulate the pH levels in our bloodstream, since any minor change in pH is lethal

5- [redacted]

* hydrogen bonds are combination of both [redacted] types of bonds.

Chapter 5 questions:

1- Mechanical work: ATP used to drive protein movement

Chemical work: ATP used to " chemical reactions in the cell.

2- Hypertonic: Solution w/ higher concentration of solute

Hypotonic: " " lower " of solute

3- ATP creates energy as the phosphate groups separate with force, since [redacted] similar compounds repel.

4- The chromosome theory of inheritance states that genes are located at specific positions on chromosomes and that the behavior of chromosomes during meiosis and fertilization accounts for inheritance patterns

Chapter 2:

1. Covalent bonds share one or more pairs of outer shell electrons. Ionic bonds are attracted with oppositely charged ions; they do not share electrons, rather transfer them. Hydrogen bonds are composed of two hydrogen atoms joined by one covalent bond, oppositely charged.
2. Surface tension is related to cohesion; hydrogen bonds give water an unusually high surface tension.
3. Water dissolves polar molecules by orienting local regions of positive and negative charge toward the charged regions of polar regions.
4. It is important to keep buffers in our bloodstream to regulate pH levels in our blood.
5. [insufficient information] :U:

Chapter 5:

1. ATP used to drive protein movement (mechanical)
   ATP used to drive chemical reactants in the cell (chemical)
2. Hypertonic: higher concentration of solute, more water.
   Hypotonic: less solute, more water.
3. ATP energizes other molecules by transferring phosphate groups to those molecules.
4. In feedback regulation, the process keeps the cell from wasting resources that could be put to better use.

Chapter 9:

1. The law of segregation states that a sperm or an egg carries only one allele for each inherited characteristic because the two members of an allele pair separate (segregate) from each other during the production of gametes.
2. The law of independent assortment states that the inheritance of one characteristic has no effect on the inheritance of another.
3. Sex-linked traits are more common in males because the x-chromosome contains many more genes than the y.

Chapter 5 questions

1) What is the difference between mechanical work and chemical work?

2) What does hypertonic and hypotonic mean?

3) How does ATP energize other molecules in cells?

4) What happens in feedback regulation?

Answers

1) Mechanical Work = ATP used to drive protein movement
Chemical Work = ATP ~~used~~ used to drive chemical [illegible]

2) Hypertonic = more [illegible]
Hypotonic = less [illegible]

3) ATP energizes other [illegible] by transferring phosphate groups to those molecules.

4) In feedback regulation, [illegible] certain resources [illegible]

Chapter 2 answers

1) Covalent bonds - Give or [illegible] electrons.
Ionic bonds - opposite charges [illegible]

2) High surface tension = Cohesion

3) Water dissolves polar molecules by orienting local regions of + and − charges toward the charged regions of polar molecules.

4) Regulate Ph levels in blood stream

Chapter 9 answers

1) Law of segregation states that a sperm or an egg carries only one allele for [illegible] characteristic because the two members of an allele pair separate from each other during the production of gametes.

2) Law of independent assortment states that the inheritance of one [illegible] has no effect on the inheritance of another.

3) Sex-linked disorders are more common in males because they only have one X-[illegible] and the Y-chromosome does not carry [illegible].

4) The chromosome theory of inheritance states that the genes are located at specific positions on chromosomes and that the behavior of [illegible] during [illegible] accounts for inheritance patterns.

5) Plants fertilize without t/c

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Ch 2 3. Water can dissolve ionic salts and many polar molecules, such as sugars, by orienting local regions of positive and negative charge toward the charged regions of polar molecules.

4. Buffers regulates pH levels in the bloodstream.

5.

Ch 5 1. ATP used to drive protein movement. (Mechanical)
ATP used to drive chemical reactants in the cell (chemical)

2.

2. Hypertonic - More solute, less water.
Hypotonic - Less solute, More water

3. ATP creates energy as the phosphate groups separate with force, since similar compounds repel.

4.

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9 1. What is the law of segregation?

2. What it is the law of independent assortment?

3. Why are sex-linked disorders more common in males?

4. What is the chromosome theory of inheritance?

5 What is self-fertilization?

1 A sperm or egg carries only one allele for each inherited characteristics because the two members of an allele pair separate/segregation from each other during the production of gametes.

2 t The inheritance of one characteristic has no effect on the inheritance of another.

3. Men have one X chromosome and a Y chromose, whereas women

4- In feedback regulation, inhibitors are used to regulate the overuse of certain resources created by enzymes.

Chapter [redacted]: 7 Questions:

1- What is the major difference between C4, C3 and CAM plants?

2- How does light behave as during Light Reactions?

3- Why does light reactions include electron transport chain?

Chapter 9:

1- Law of Segregation: Sperms and eggs carry only one allele for each inherited characteristic since two members of an allele pair separate during production of gametes.

2- Independent Assortment: The inheritance of one characteristic has no effect on the inheritance of another.

3- Men are more common to recieve sex-linked diseases since they inherit only one chromosone from the mother, while the female has two different traits from both Parents that can cancel the trait.

4. The chromosome theory of inheritance states that genes are located at specific positions on chromosomes and that the behavior of chromosomes during meiosis and fertilization accounts for inheritance patterns.
5. Plants fertilize without

have 2 x-chromosomes. a female would have to inherit 2 to recessive traits to develop a recessive disorder, whereas a male would only have to inherit 1.

4. Genes are located at specific positions on chromosomes and the behavior of chromosomes during meiosis and fertilization accounts for inheritance patterns.

5. When plants fertilize without the help of other.