Sydney Jordan 1/18/12

Questions on Chapter 3

1) what are the major differences between lipids, proteins, nucleic acids, and carbohydrates?

2) What is the function of starch?

3) ~~Lipids are hydrophobic, so~~ Why is oil separated from vinegar in Italian dressing?

4) What determines a protein's structure?

5) Steroids are classified as what?

Questions on Chapter 9

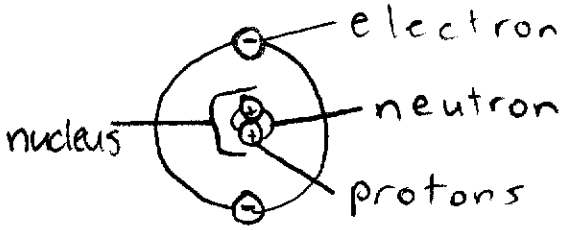
1) Inbreeding is for a dominant or recessive disorder?
2) Common disorders are mainly dominant or recessive traits?
3) How does a testcross find out the missing genotype? Do you cross the one with the missing gene with a homozygous dominant, homozygous recessive, or a heterozygous organism?
4) What's the difference between codominance and incomplete dominance?
5) Is it easier for crossing over to occur with chromosomes that are further apart or closer together on a tetrad?

Isaac Martinez

Chapter 2 Questions

1. How does the pH scale work?
   It from a scale of 0-14, 14 being the least acidic (lower H^+ concentration) and 0 being the most acidic (greater H^+ concentration)

2. What are the parts of an atom?



3. What is a chemical reaction?
   When molecules rearrange by breaking existing chemical bonds and forming new ones. The reactants make a chemical reaction in order to make the product.

4. What's an ionic bond?
   The attraction between oppositely charged ions.

5. What's an isotope?
   It's an element in a different form. It has the same numbers of protons and electrons but different numbers of neutrons.

Isaac Martinez

Questions Chapter 10

1. What is the difference between RNA, tRNA, ... mRNA

RNA made in the process of Transcription. mRNA is used from Transcription to be translated by tRNA.

2. What is the structure of DNA?

A molecule of DNA has two [illegible] form. Each nucleotide consists of a nitrogen base, a sugar, and a phosphate group.

3. How does a DNA molecule make a copy of itself?

The parental DNA unwinds by an enzyme and it serves as a template for a new strand of DNA. So both daughter DNA [illegible] one new strand of DNA and one old strand of the parent DNA.

4. How does DNA make [illegible]

DNA goes [illegible] process of transcription in the [illegible]. It creates RNA which then goes through the process of [illegible] of translation [illegible] proteins in the cytoplasm.

5. How does a mutation occur?

A mutation occurs when one or more nitrogen bases is replaced by a different nitrogen base. That is called base substitution. When a nitrogen base gets deleted or added that also makes a mutation. Those are called base insertion or deletion.

Nawoon Yoon 1/17/12

Chapter 5

1. what is the purpose of active transport? Many reasons to move across the concentration. ex Muscle cell contraction. ← Requires A cell expend energy to move across a membrane.

2. The difference of exocytosis & endocytosis ~~& receptor mediated endocytosis~~? answer: ↓ secretes proteins from outside from inside (opposite of exo).

3. The purpose of enzyme inhibitors? Why does there have to be an induced fit? What does it produce? Helps cells functions

4. energy conversions between a car and a cell?, Explain? Look in the book

5. What is a plasma membrane? its purpose? (regulates the passage of materials in & out.)

6. The main reason of ATP is to create energy for other cellular work? by losing a phosphate? Please explain the difference between mechanical work, transport work, and chemical work? Its purpose to create ADP+P?

7. The ATP cycle is caused from ADP+P by energy coupling? ↑ what is this?
OR By the energy released by cellular respiration. answer: no

8. Discuss the membrane function.

a. ~~attach~~ attachment to the cytoskeleton and extracellular matrix

b. cell signaling e. intercellular joining

c. Enzymatic Activity f. cell-cell recognition.

D. transport Answer: All is done in the plasma membrane & ① is all the proteins function.

1/19/12.

Nawoon Yoon

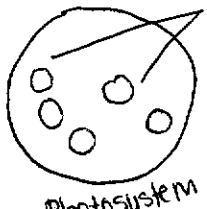
Ch. 7 & Photosynthesis

1. Is the function of the thylakoid membrane is to capture light energy, or a specific chlorophyll molecule? 1b. the structure of the chloroplast's functions by providing a bigger SA for photosynthesis? answer: Yes. 1b. Yes

2. What is the purpose of redox reaction in photosynthesis? When Electrons are boosted uphill, how does the hydrogen transfer from water to carbon dioxide? One product gains & other loses electrons

3. In photosynthesis, why does light drive electrons from water to NADP+ to NADH? answer: light comes after H2O splitting. / How

4. The start of a photosystem harvest light energy is when a pigment molecule absorbs a photon? Is this the start of light energy? What does pigment have to do with this process, of getting a photon excited? answer: Yes

5. 

Are these are pigments? if these are, how does these work? I though pigments absorbed photons, but how do they bounce them around?

answer: Yes

6. Explain how the generating of ATP and NADPH? How is the water-splitting process important? where (roots) does the water come from? answer: Generates the entire process.

7. Does the Calvin cycle occur in the stroma? The purpose of the Calvin cycle is to produce G3P?

Answer: Yes. Yes

Answers to Chapter 3

1.) A lipid is a fat that restores energy, makes steroids, and gives insulation. Proteins are constructed from amino acids. A protein can denature because they're sensitive to their environment. Nucleic acids are information storage molecules that provide direction for making proteins. Carbohydrates are small sugar molecules. There are monosaccharides, disaccharides, and polysaccharides.

2.) ~~Starch is a polysaccharide that allows plant cells to~~ Starch stores energy

3.) Italian dressing is a lipid which is hydrophobic. The vinegar in Italian dressing is mainly water so the oil is separated from it.

4.) Each polypeptide chain has a sequence specified by an inherited gene. and that relationship between the gene and the protein determines the protein structure.

5.) Lipids.

Answers to Chapter 9

1.) Recessive Disorder

2.) Recessive

3.) A testcross finds out the missing allele by crossing the organism with a homozygous recessive organism.

4.) Incomplete dominance is when the phenotype of an offspring is in between the phenotype of the two parents. Codominance is when both alleles are expressed in heterozygous individuals.

5.) Crossing over is more likely to happen with chromosomes that are further apart.