Quiz #1

This quiz consists of 10 multiple choice questions and 10 fill-in-the blank questions for a total of 20 points. Select the best answer for each question. Good luck!

Multiple choice: choose the correct answer (1 point each; 10 points total):

1) Which of the following is NOT a fundamental characteristic of life?
   a. Ability to communicate with other members of the same life form
   b. Ability to regulate the internal environment of the life form
   c. Ability to utilize energy derived from the external environment
   d. Ability to respond to stimuli

2) Some scientists do not consider viruses to be living organisms because they do/are not:
   a. Respond to stimuli
   b. Evolve
   c. Made of a cell(s)
   d. None of the above

3) A systematic program or approach with defined steps that include careful observation and experimentation is something we call:
   a. Hypothesis-generation
   b. The scientific method
   c. Science
   d. Magic

4) Choose the best definition for the word “hypothesis.”
   a. A suggested explanation that can be tested
   b. A tested explanation found to be generally true
   c. A question based upon observation
   d. A gut-feeling

5) Select the answer that places the scientific method in proper order:
   a. Question, experiment, hypothesize, question, analyze, predict, communicate
   b. Hypothesize, question, predict, experiment, observe, analyze, communicate
   c. Observe, question, hypothesize, predict, experiment, analyze, communicate
   d. Observe, hypothesize, questions, communicate, predict, analyze, experiment

6) What do we call an explanation for a phenomenon that has been tested by numerous related experiments and revised hypotheses?
   a. A theory
   b. A dependent variable
   c. A control group
   d. A question

7) Which of the following is the fundamental unit of matter?
   a. The molecule
   b. The electron
   c. The atom
d. A pinch

8) The four types of biological molecules or macromolecules are:
   a. **Carbohydrates, lipids, nucleic acids, and proteins**
   b. Lipids, nucleic acids, proteins, and waxes
   c. Carbohydrates, aminos, hydroxyls, and proteins
   d. Carbohydrates, sugars, nucleic acids, and proteins

9) Polymers are made of chains of:
   a. Hydrogen
   b. **Monomers**
   c. Amino acids
   d. Peptides

10) Subunits of macromolecules are joined by _____ and broken apart by _____:
   a. Hydrolysis; dehydration synthesis
   b. **Dehydration synthesis; hydrolysis**
   c. Dehydration hydrolysis; synthesis
   d. Synthesis; dehydration hydrolysis

Fill-in-the-blanks: choose the correct term for each blank (1 point each blank; 10 points total):

Terms: bacteria, starch, cellulose, chitin, unsaturated, nucleic acids, cells, organic, carbohydrates, lipids, proteins, phospholipids, oils, fats, viruses, organic, life, inorganic, glycogen, nucleotides, saturated.

1. **Saturated** fats are solid at room temperature.
2. Biology is the study of ___life__________.
3. All living things are made of one or more _____________.
4. **Viruses** are the most abundant entities on the planet.
5. **Organic** molecules contain a carbon skeleton bonded to hydrogen atoms.
6. **Carbohydrates** provide energy in the short term.
7. **Starch** and **glycogen** are storage carbohydrates.
8. **Phospholipids** have hydrophobic tails and hydrophilic heads.
9. DNA and RNA are two different types of **nucleic acids**.