

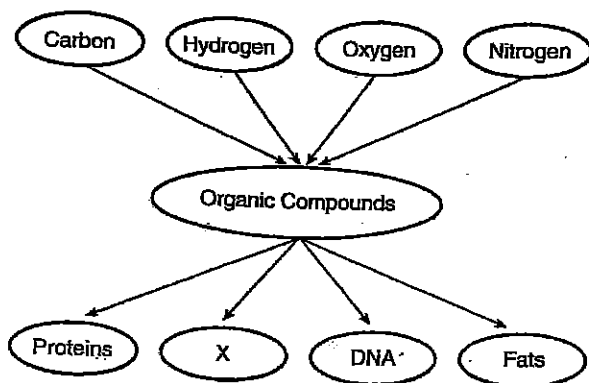
Name: _____

Cells #1.

1. The two elements found in every organic compound are
- 1 nitrogen and oxygen
 - 2 oxygen and hydrogen
 - 3 carbon and hydrogen
 - 4 carbon and oxygen

2. Which statement concerning simple sugars and amino acids is correct?
- 1 They are both wastes resulting from protein synthesis.
 - 2 They are both needed for the synthesis of larger molecules.
 - 3 They are both building blocks of starch.
 - 4 They are both stored as fat molecules in the liver.

Refer to the diagram below to answer question 3.



3. What substance could the letter X represent?
- 1 carbohydrates
 - 2 carbon dioxide
 - 3 ozone
 - 4 water
4. Which family of organic compounds is used mainly to store energy and to build certain materials in cells?
- 1 lipids
 - 2 carbohydrates
 - 3 proteins
 - 4 nucleic acids

5. The subunits that make up proteins are
- 1 amino acids
 - 2 single atoms
 - 3 fats and lipids
 - 4 nucleic acids

An iodine test of a tomato plant leaf revealed that starch was present at 5:00 p.m. on a sunny afternoon in July. When a similar leaf from the same tomato plant was tested with iodine at 6:00 a.m. the next morning, the test indicated that less starch was present. This reduction in starch content most likely occurred because starch was

- 6.
- 1 changed directly into proteins
 - 2 transported downward toward the roots through tubes
 - 3 transported out of the leaves through the guard cells
 - 4 changed into simple sugars

7. The subunits of DNA are called
- 1 amino acids
 - 2 nucleotides
 - 3 polysaccharides
 - 4 cell units

8. How is RNA related to proteins?
- 1 Proteins are made up of RNA molecules.
 - 2 RNA determines which proteins are made.
 - 3 RNA is copied into DNA to build a protein.
 - 4 DNA is copied into RNA to build a protein.

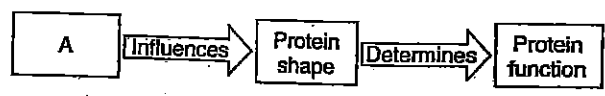
9. DNA molecules are important because they store
- 1 fats for energy
 - 2 genetic information
 - 3 carbohydrates
 - 4 polysaccharides

10. Which of the following is *not* an idea of the cell theory?
- 1 Organisms are made up of one or more cells.
 - 2 Cells bond together much like atoms do.
 - 3 The cell is the basic unit of structure in all living things.
 - 4 All cells arise from previously existing cells.

Name:

Cells # 2

Refer to the diagram below, which provides some information about proteins, to answer question # 1.



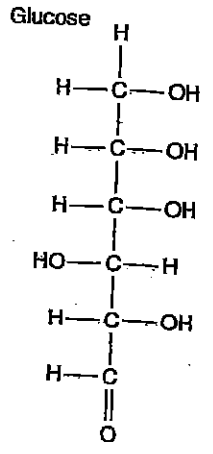
1. Which phrase does the letter A most likely represent?
- 1 sequence of amino acids
 - 2 sequence of starch molecules
 - 3 sequence of simple sugars
 - 4 sequence of ATP molecules
2. Which sequence represents the correct order of levels of organization found in a complex organism?
- 1 cells → organelles → organs → organ systems → tissues
 - 2 organelles → cells → tissues → organs → organ systems
 - 3 tissues → organs → organ systems → organelles → cells
 - 4 organs → organ systems → cells → tissues → organelles

Refer to the diagrams of the organisms shown below to answer question # 3.



3. Which statement concerning organism A and organism B is correct?
- 1 Organism A contains tissues and organs, while organism B lacks these structures.
 - 2 Organism A and organism B have structures that help them maintain homeostasis.
 - 3 Organism A and organism B have the same organs to perform their life functions.
 - 4 Organism A lacks structures that maintain homeostasis, while organism B has them.
4. Every single-celled organism is able to survive because it carries out
- 1 metabolic activities
 - 2 heterotrophic nutrition
 - 3 autotrophic nutrition
 - 4 sexual reproduction

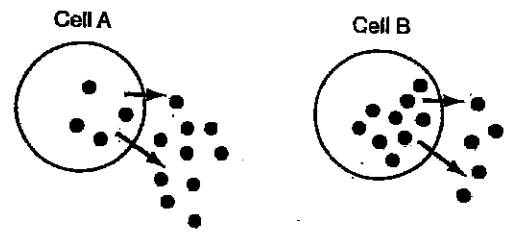
5. Based on the elements in glucose, and the way the atoms are attached, you could determine that glucose is an example of



- 1 a carbon molecule
 - 2 a hydrogen molecule
 - 3 an organic compound
 - 4 an inorganic compound
6. When many of these glucose subunits join together, they make up a
- 1 protein molecule
 - 2 polysaccharide
 - 3 lipid molecule
 - 4 DNA molecule

7. What happens during diffusion?
- 1 Molecules move automatically from an area of higher concentration to an area of lower concentration.
 - 2 Molecules are pumped from an area of lower concentration to an area of higher concentration.
 - 3 An enzyme joins with a particular molecule.
 - 4 A catalyst speeds up the rate of a chemical reaction.

Base your answer to question 8 on the diagram below, in which the dark dots represent small molecules. These molecules are moving out of the cells, as indicated by the arrows. The number of dots represents the relative concentrations of the molecules inside and outside of the two cells.



8. ATP is being used to move the molecules out of
- 1 cell A only
 - 2 cell B only
 - 3 both cell A and cell B
 - 4 neither cell A nor cell B