

TEST NAME: Macromolecules Quiz
TEST ID: 3197235
GRADE: 10 - Tenth Grade
SUBJECT: Life and Physical Sciences
TEST CATEGORY: School Assessment

08/30/19, Macromolecules Quiz

Student: _____

Class: _____

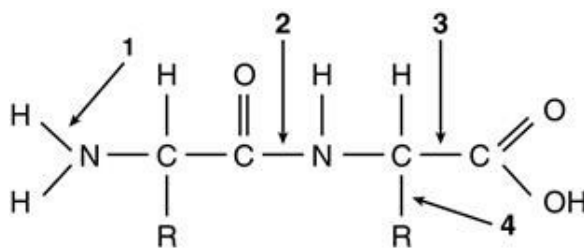
Date: _____

1. What is the significance of nucleic acids for cells?
 - A. They generate energy for the cell.
 - B. They restrict what enters and leaves the cell.
 - C. They support and maintain the shape of the cell.
 - D. They provide all instructions for synthesizing proteins.

2. **Biomolecules contain a variety of atoms. Which biomolecule maintains a ratio of 1 carbon atom to 2 hydrogen atoms to 1 oxygen atom?**
 - A. lipid
 - B. protein
 - C. nucleic acid
 - D. carbohydrate

3. Which is a function of proteins?
 - A. to store hereditary (genetic) information
 - B. to provide insulation to organisms
 - C. to provide a quick supply of energy
 - D. to provide structure and transport materials in cells

4. The structural diagram demonstrates two joined amino acids.



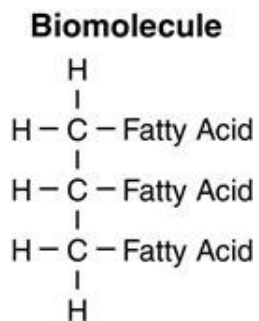
Which arrow points to the peptide bond?

- A. 1
 - B. 2
 - C. 3
 - D. 4
5. Which organic molecules are used for long-term energy storage?
- A. lipids
 - B. proteins
 - C. nucleic acids
 - D. carbohydrates
6. What are the components of each nucleotide?
- A. glucose, water, and cellulose
 - B. adenine, thymine, and cytosine
 - C. a phosphate group, a sugar molecule, and a nitrogenous base
 - D. a phosphate group, a five-carbon sugar, and an amino acid
7. What is a difference between saturated and unsaturated fats?
- A. Saturated fats are liquid and unsaturated fats are solid.
 - B. Saturated fats are solid and unsaturated fats are liquid at room temperature.
 - C. Saturated fats are healthier for you than unsaturated fats.
 - D. Saturated fats contain double carbon bonds and unsaturated fats have single bonds.

8. Which of the following is *not* a polysaccharide?

- A. starch
- B. galactose
- C. glycogen
- D. cellulose

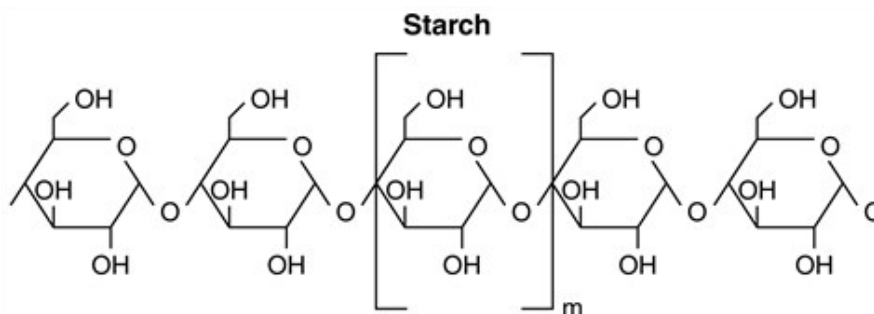
9. The diagram shows the basic structure of a biomolecule.



Which of the following foods would be the *best* source of this molecule?

- A. butter
 - B. apples
 - C. broccoli
 - D. bread
10. A biological molecule is analyzed, and it is discovered that the molecule is composed of several amino acids. Which of these correctly identifies the biological molecule?
- A. It is a lipid.
 - B. It is a protein.
 - C. It is an unsaturated fat.
 - D. It is a monosaccharide.
11. Which of these generally contains the atoms carbon, hydrogen, and oxygen in the ratio 1:2:1?
- A. proteins
 - B. lipids
 - C. carbohydrates
 - D. steroids

12. The diagram shows the structural formula for starch.



Which of the following explains why starch is a polymer?

- A. repetitive combination of simple subunits
- B. organic molecule with the presence of nitrogen
- C. it's an essential component of DNA
- D. contains carbon-based functional groups

13. Which biomolecule does NOT contain the element nitrogen?

- A. protein
- B. peptide
- C. nucleic acid
- D. carbohydrate

14. Proteins function to provide structure for tissues and organs. Which of the following represents two of the building blocks for proteins joined by a peptide bond?

- A.
- B.
- C.
- D.

15. Which organic molecule is paired with its function?

- A. nucleic acid : to store energy
- B. proteins : to provide insulation
- C. lipids : to act as enzymes
- D. carbohydrate : to provide quick-release energy