

High School Biochemistry Essentials

Biochemistry · Answer Key · 12 Questions

1. Which polysaccharide is the primary energy storage molecule in plants?

- A) Glycogen
- B) Starch**
- C) Cellulose
- D) Chitin

2. Which component makes up the 'backbone' of a DNA molecule?

- A) Nitrogenous bases
- B) Deoxyribose sugar and phosphate groups**
- C) Amino acids
- D) Hydrogen bonds

3. What are the individual monomer units that make up proteins?

- A) Nucleotides
- B) Monosaccharides
- C) Amino acids**
- D) Fatty acids

4. Which element is found in all organic molecules?

- A) Nitrogen
- B) Carbon**
- C) Iron
- D) Sulfur

5. What is the function of enzymes in biochemical reactions?

- A) To act as a fuel source
- B) To increase activation energy
- C) To speed up reaction rates**
- D) To store genetic information

6. Which type of bond links amino acids together in a polypeptide chain?

- A) Peptide bond**
- B) Ionic bond
- C) Hydrogen bond
- D) Glycosidic bond

7. What is the primary role of adenosine triphosphate (ATP) in cells?

- A) Storing genetic data
- B) Providing energy for cellular work**
- C) Building cell walls
- D) Catalyzing chemical reactions

8. Which lipid is the primary structural component of the cell membrane?

- A) Triglyceride
- B) Steroid
- C) Phospholipid**
- D) Wax

9. What is the main sugar used by cells for immediate energy?

- A) Fructose
- B) Glucose**
- C) Lactose
- D) Sucrose

10. Which nitrogenous base is found in RNA but not in DNA?

- A) Adenine
- B) Cytosine
- C) Uracil**
- D) Guanine

11. What determines the specific function of a protein?

- A) Its 3D shape and structure**
- B) The color of the cell
- C) The number of phosphate groups
- D) The presence of sulfur only

12. Which term describes the 'optimal' temperature at which an enzyme functions most efficiently?

- A) Denaturation point
- B) Active site
- C) Optimal temperature**
- D) Inhibition point