

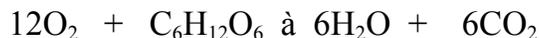
## Chemistry in Biology

- List the following polymers with its monomer.
  - Protein
  - Lipid
  - Carbohydrate
  - Nucleic Acid
- Proteins that acts as a catalyst
- If nitrogen has an atomic number of 9, how many electrons are in its outer energy level (orbital)?
- A chemical reaction which absorbs energy is called
- An atom that has a positive or negative electrical charge is called a
- A chemical substance that neutralizes an acid or a base
- All organic molecules have, what element in them
- Monomers combine to form polymers by a process called
- Molecules with the same molecular formula but different structures
- Attractive force between two alike molecules

True/False – answer the following questions as True (A) or False (B)

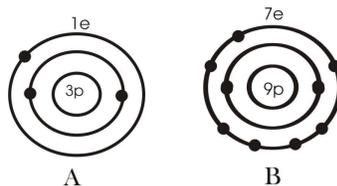
- Atoms share electrons in hydrogen bonds and transfer them in ionic bonds
- Lipids are insoluble and at the same time attract nutrients by their polarity.

Answer the following True/False questions (23-25) about the following chemical formula



- Is the equation is balanced?
- Are there more carbon molecules on the reactant side of the equation?
- Are there more oxygen atoms on the product side of the equation?

Answer the following question by looking at the following atoms



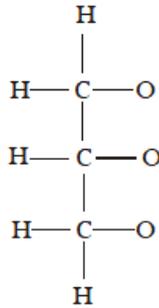
- Atom A has an atomic number of 3.
- Atom A and B will form a chemical bond by sharing one electron, filling their outer energy levels.
- By able to identify the structure of the following
  - Glycerol
  - Amino acid
  - glucose
- Explain why water is a unique molecule that helps make life on earth possible
- What is a hypothesis vs. a theory

21. Ionic bonds occur when atoms
22. Groups on the periodic table include elements that have the same
23. What are the charges of protons, neutrons, and electrons?

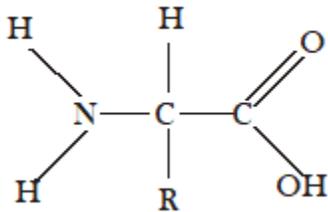
## Chemistry in Biology- Answers

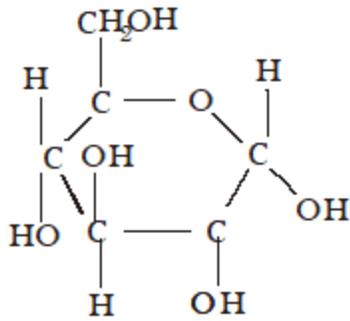
1. Amino Acids
2. Glycerol
3. Glucose
4. Nucleotide
5. Enzymes
6. 7
7. Endergonic
8. Buffer
9. Carbon
10. Dehydration synthesis
11. Isomers
12. Cohesion
13. False
14. True
15. False
16. False
17. False
18. True
19. False

20.



21.





22.

23. Best solvent, cohesion and adhesion, polar molecule, Ice is less dense than water, and temperature moderation
24. A hypothesis is a testable explanation and a law describes a relationship under certain conditions.
25. Give electrons
26. Chemical and physical properties
27. Protons = positive  
 electrons = negative  
 Neutrons = no charge