

## Final Exam Study Guide Unit 2: Chemistry of Life

1. All metabolism of a cell occurs in the \_\_\_\_\_ of the cell, which is made up mostly of \_\_\_\_\_.
2. The type of bond between the oxygen and hydrogen where they share electrons in a water molecule is a \_\_\_\_\_ bond.
3. Water is (circle or highlight one) **polar / nonpolar** because the electrons are not evenly shared. This trait allows water to form \_\_\_\_\_ bonds, allowing for the essential properties of water.
4. Match properties of water with their description  

_____ Cohesion	a. Easily dissolves other polar substances
_____ Adhesion	b. Moderation of temperature
_____ Surface Tension	c. Attraction of water to other water molecules
_____ Universal Solvent	d. Force holding molecules together on surface of liquid
_____ High Specific Heat	e. Allows ice to float
_____ Density as Solid	f. Attraction of water to other charged substances.
5. Organic compounds have the element \_\_\_\_\_ bonded to at least a hydrogen atom.
6. Carbon is very unique in that can form up to \_\_\_\_\_ covalent bonds with other atoms, including other carbon atoms, allowing it to form complex molecules.
7. What are the 4 organic macromolecules found in all living things?