

BIOCHEMISTRY 2024 Quiz #1 Topics

Noted: Be able to recognize all monomers, polymers for the molecules we studied.

Readings taken from **McGraw-Hill Ryerson Biology 12 © 2011** – online. Be sure to come and ask me for help all the time!!!

Lesson	Date	Topic	Pages
1		Introduction to Biochemistry atoms, valence electrons, 4 models of atoms (electron, space filling, structural, molecular), covalent molecules, ionic compounds, organic molecules, 3 intramolecular bonds (covalent, polar covalent, ionic), electronegativity, 2 intermolecular bonds (hydrogen, van der Waals), bond energy	4-6, 10-13, 15
2		Types of Reactions and Functional Groups , <i>Water's</i> special properties, 4 types of reactions (dehydration synthesis, hydrolysis, neutralization, redox), 6 functional groups, (hydroxyl, carbonyl, carboxyl, amino, phosphate, sulfhydryl), monomers and polymers	14, 18, 32-35
3		Carbohydrates , monosaccharide, disaccharide, polysaccharide, isomer, glycogen, cellulose, α and β glycosidic bond	19-21 * p 30, 35
4		Lipids , fatty acid, glycerol, triglyceride, saturated, unsaturated, phospholipid, cholesterol, steroids, hydrophilic, hydrophobic, ester bond	21-24 * p 30, 35
5		Proteins , 3 main types, amino acids, R groups, polar, non-polar, peptide bond, polypeptide, primary, pleated or helix secondary structure, tertiary and quaternary structure, 4 protein functions (transport, enzymes, recognition, signaling)	25-29 * p 30, 35

- Be sure to complete [16b Macromolecules concept map.doc](#)
- [16b Macromolecules Review Diagrams.doc](#) , [16b Macromolecules Review Diagrams Answers](#).
- [For reference : Macromolecules Chart MHR p 30](#)
- Bring a calculator, be sure you know your functional groups