

## The Chemistry of Life Concepts to Review

30 multiple choice (30 points), and 3 Free Response - 1 long response question (12 points) and 2 short response questions (4 points each)

LEVELS OF QUESTION: 1 = knowledge & comprehension, 2 = synthesis & evaluation, 3 = analyze & apply

### 3.1

Level of Question	Content
1	Types of bonds between water molecules and within water molecules
1	Electronegativity of water molecules
3	Water bonding with other molecules

### 3.2

Level of Question	Content
1	Specific heat of water
3	Water and temperature changes
3	Polarity of water and types of solutes
	<b>Know, in great detail, the properties of water and how they are essential to life</b>

### 3.3

Level of Question	Content
1 & 2	Effect of increased CO <sub>2</sub> concentrations on seawater
1	Effects of Acidification of seawater

### 4.1

Level of Question	Content
1	Properties of carbon
3	Organic molecules and diversity of life
	<b>The Carbon cycle – know processes and how carbon cycles through each process</b>

### 4.2

Level of Question	Content
1	Enantiomers
2	Pathway of carbon in an ecosystem
1	isomers

### 5.1

Level of Question	Content
3	Animal metabolism and macromolecules

1	Relationship between dehydration reactions and hydrolysis
1	Molecules that are and are not formed by dehydration reactions

## 5.2

Level of Question	Content
3	Molecular formula for a carbohydrate polymer that has X amount of monomers
1	Identify structures
1	Starch and cellulose

## 5.3

Level of Question	Content
1	Saturated fatty acids
1	Steroid
1	Identify structures

## 5.4

Level of Question	Content
1	Amino acid characteristics
1	Protein structure characteristics
1	Identify structures
	<b>Types of bonds/interactions found in proteins and how those interactions determine the protein structure</b>

## 5.5

Level of Question	Content
1	5' end of polynucleotide
3	Purines and pyrimidines
1	Identify structures