Chemistry 2202 – Final Exam Review

**Exam Format and Specifications:**

This exam will last three (3) hours. It will be a cumulative exam, with equal weighting of outcomes reflecting the instructional time allotted for each outcome. It will consist of 2 parts:

Part A: Selected Response – 40 Items @ 1% each for a total of 40%

Unit 1: 18 Selected response

Unit 2: 13 Selected response

Unit 3: 9 Selected response

Part B: Constructed Response – 60%

Unit 1: 27% Constructed Response

Unit 2: 17% Constructed Response

Unit 3: 16% Constructed Response

Topics Covered By Unit:

Unit 1: Stoichiometry

1. Isotopes and Atomic Mass
2. Avogadaro’s Number and the Mole
3. Calculating Molar Mass
4. Mass/Mole Calculations
5. Mole/Mole Stoichometry
6. Mass/Mole Stoichometry
7. Mass/Mass Stoichiometry
8. Limiting Reactants
9. Percent Yield
10. Molar Volume
11. Molar Concentration
12. Dissociation and concentration
13. Solution Stoichiometry

Unit 2: Bonding

1. Valence, Lewis Diagrams, Bonding Electrons, Lone Pairs
2. Lewis Diagrams and Structural Formulas
3. Ionic, Molecular and Metallic Bonding
4. Polarity, Dipoles, Electronegativity and VSEPR Diagrams
5. Intermolecular Forces

Unit 3: Organic Chemistry

1. Isomers
2. Naming and Drawing Alkanes
3. Naming and Drawing Alkenes and Alkynes
4. Cyclic Hydrocarbons
5. Aromatic Hydrocarbons and Benzene Ring Properties
6. Naming and Drawing Hydrocarbon Derivatives
   * 1. Alcohols
     2. Ethers
     3. Alkyl Halides
     4. Ketones
     5. Aldehydes
     6. Amines
     7. Amides
     8. Esters
     9. Carboxylic Acids
7. Chemical Reactions involving organic compounds
   1. Addition Reactions of Alkenes/Alkynes
   2. Elimination Reactions of Alkyl Halides
   3. Substitution Reactions of Alkanes/ Benzene
   4. Cracking and Reforming of Hydrocarbons
   5. Complete and Incomplete Combustion of Hydrocarbons
   6. Condensation Reactions: Esterification and Amide Synthesis
8. Polymer Synthesis
   1. Addition Polymers
   2. Condensation Polymers

***Resources and Practice***

Please Visit mrrumbolt.weebly.com for extensive exam resources under the ‘exam resources’ heading in Chemistry 2202. Also, please note there are 2 sample exams posted on the site as well for practice. Your exam will follow the same format as those posted.