Big Chem Final Review

Although you may use your notes on the Final Exam, there is insufficient time to look up very much. You MUST know your stuff for this exam!!!

Practice your notes in writing! Here are some things to be sure you know:

All **Symbols** and **Valences** and **Formula Writing**! Practice on the computer disk and **in writing** on the practice sheet. Practice **Balancing Equations**!

Practice in writing each type of chemical problem. For Example:

The Gas Lows Boyle's Law Charles' Law Combined Gas Laws Ideal Gas Law Equation Vapor Pressure Boiling Point Dalton's Law Partial Pressure Correct to STP Graham's Law of Diffusion Density of Gases Molar Volume Equations with Gas Volumes Molarity of Solutions, M

Ionization

The Big K of Equilibrium The Principle of le Chatelier Solubility Product Will a ppt form? Get Moles From mass From Concentration, M

Terms: Be able to Define, Explain, and Provide Examples for these terms:

Molar Volume

STP

Liquids Vapor Pressure **Boiling** Point Two ways to boil Charles's Law Absolute Temp Melting Point Warming curve for H₂O Triple Point Heat of Fusion Heat of Vaporization Surface Tension Capillarity Ducky Humidy Psychrometer Gases Boyle's Law Charles' Law Dalton's Law of Pressure STP Principle of le Chatelier Regelation Shift Equilibrium Pressure Temperature Concentration Sublimation Gases Boyle's Law Charles' Law Combined Gas Laws Ideal Gas Equation Dalton's Law of Partial Pressure

Correct to STP Density of Gases MM for Gases Enthalpy Entropy Min Energy Max Randomness Solutions Solute Solvent Concentration M = mol/literAt Equilibrium Ions & Molecules Colligative Props Suspensions Colloids Fractional Distillation Catalvst Reaction Rate Pressure Temperature Concentration Surface Area Nature of Reactants Catalyst Rate Law Reaction Mechanism Equilibrium Constant Theory of

Acid Three Types Arrhenius Bronsted Lewis Base Salt Props of Acids Props of Bases **Ionic Equations** Big K for Ions Common Ion Effect Electrolytes Big K for solubility Big K for Water The pH Scale The Hydronium Ion Hydrolysis Buffers Titration Oxidation Reduction REDOX Balancing by Oxidation Table Oxidation Numbers Electrochemical Cells Battery of Cells Electrolysis Nuclear Chemistry SubAtomic

Accelerators Linear Circular Half-Life Transmutation Nuclear Reactors Parts of Reactors Nuclear Fission Nuclear Fusion Nuclear Bombs Radioactive Dating Organic Chemistry Alkanes Alkenes Alkvnes Alcohols Phenols Ethers Aromatic Compounds Benzenes Phenols Aledhvdes Ketones Acids Esters Amines Organic Reactions Halogen Substitution Halogen Addition **Pyrolysis** Wurtz doubles

Particles

the Chain Reasons for so many Organic Compds Types of Formulas Oualitative Analysis Theory Separation Identification Silver Group Separation Cu-As Group Separation Al-Ni Group Separation Ba-Mg Group Separation Flame Tests Sodium Potassium Barium Sep Cu Group from As Group Sep Al Group from Ni Group Amphoterism Paranitrobenzene azoresorcinol Flocculent Blue Lake ppt. Dense White Fumes Centrifuge Decant Precipitate