



**EFFECTIVE: SEPTEMBER 2004**



53. explain the following terms: substance, matter, element, compound, mixture, homogeneous and



9. **Electrical Nature of Matter**  
Charge, electrons, nucleus, protons, neutrons, ions, electrolysis, conductivity, ionic compounds, polyatomic ions, isotopes.
10. **Chemical Equations**  
Conservation of mass, balancing equations, special symbols, combustion, types of reactions.
11. **Stoichiometry**  
Reactions, mole relationships, mole-mole and gram-gram conversions, limiting reagent, theoretical yield, activity series.
12. **Solutions**  
Terms, concentration, solubility, solution stoichiometry, dissociation, precipitation, ionic and net ionic equations.
13. **Acids and Bases**  
Classification, properties of acids and bases, strong and weak acids, hydronium ion, electrolytes, titration.
14. **Gases**  
Direct proportionality, graphing review, inverse proportionality, variables – pressure, volume, Temperature, moles – Gas Laws, Ideal Gas Equation, molar volume, molecular mass.
15. **Oxidation-Reduction Review**

### **Laboratory Course Content**

Experiments will be selected from the following list:

1. Introduction and analytical balance
2. Chemistry in the kitchen
3. Physical and chemical changes
4. Mass measurements
5. Volume measurements
6. Graphing
7. Conservation of mass
8. Types of chemical reactions
9. Periodic table
10. The mole
11. Gas Laws
12. Stoichiometry
13. Factors Influencing The Rates of Chemical Reactions

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**Q: Means of Assessment**

The student's performance in the course will be evaluated in the following fashion:

1. Laboratory work (24%)  
Laboratory reports will be written in the laboratory note book and graded either pass or fail.
2. Examination (76%)