

Learning Objectives

Class: Grade 11 Sc.

Subject: Chemistry

Teacher: Mr. Viken Dishgekenian

Title: Chapter 1- Thermochemistry

Objectives:

- Define the thermal effects of chemical reactions.
- Define heat of formation.
- Apply Hess's law of summation.

Title: Chapter 2- Oxidation and Reduction

Objectives:

- Define oxidation and reduction.
- Predict whether a redox reaction occurs or not.
- Half reactions and overall.

Title: Chapter 3- Oxidation-Reduction Potential

Objectives:

- Give the characteristics of a galvanic cell.
- Define the redox potential.
- Classify the redox couples with respect to H^+/H_2 .

Title: Chapter 4- Balancing Redox Reactions

Objectives:

- Define oxidation number of an element.
- Explain redox reactions.
- Know how to balance redox reactions..

Title: Chapter 5- Electrolysis.

Objectives:

- Perform electrolysis.
- Interpret the reaction taking place at the electrodes..

Title: Chapter 6- Volumetric Titration of Redox Reactions

Objectives:

- Know the principle of volumetric titration.
- Define and determine the equivalence point.
- Master the technique of titration.
- Know how to determine the concentration of the solution being titrated.

Title: Chapter 12- Elemental Analysis

Objectives:

- Know an organic compound.
- Write the empirical and molecular formula.
- Acquire the concept of isomerism.
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Title: Chapter 13- The Alkanes

Objectives:

- Identify saturated and unsaturated hydrocarbons.
- Identify the alkanes.
- Name the alkanes.
- Know the chemical reactions of alkanes.
- Nomenclature of alkanes.
- Isomers of alkanes.
- Alkyl groups and IUPAC rules.

Title: Chapter 14- Alkenes, Alkynes and Benzene

Objectives:

- Recognize alkenes and alkynes.
- Name alkenes and alkynes according to IUPAC rules.
- Isomers of alkenes and alkynes.
- The reactivity of alkenes and alkynes.
- Addition reactions of alkenes and alkynes.
- The resonance structure of benzene.
- Define aromatic compounds.
- Know the substitution and addition reactions of benzene.
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