

Thermodynamics Topic Tree



The **Thermodynamics** topic tree from the provided CBSE Chemistry textbook (Thermodynamics section) is structured as follows:

Unit 6: Thermodynamics

1. Introduction

- Overview of energy transformations
- Relevance to chemical reactions and physical processes

2. Thermodynamic Terms

- **System and surroundings**
- **Types of systems:** Open, closed, isolated
- **State of the system**

3. Internal Energy

- Definition and significance
- Work and heat exchange

4. First Law of Thermodynamics

- Statement and mathematical form
- Energy conservation principles
- Applications in chemical systems

5. Enthalpy (H)

- Definition and state function
- Relationship between ΔU and ΔH

6. Standard Enthalpy Changes

- Standard states
- Measurement and calculation

7. Enthalpy for Reactions

- **Hess's Law**
- Applications and examples

8. Properties of Thermodynamic Quantities

- **Extensive vs. Intensive Properties**

9. Spontaneity and Processes

- **Spontaneous and non-spontaneous processes**
- Role of entropy in spontaneity

10. Second Law of Thermodynamics

- Entropy and its significance

11. Gibbs Free Energy (G)

- Definition and relationship to spontaneity
- Relation to equilibrium constants

12. Applications

- Predicting feasibility of reactions
 - Driving forces in chemical changes
-