**Assignment 2**

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**Class:** 2nd Year (Pre-Medical)  
**Subject:** Chemistry  
**Topic:** *Hydrocarbon Names*

## **Relation of Chemistry with Biology**

1. **Biochemistry (Bridge of Chemistry & Biology):**
   * The study of living organisms at the molecular level is called **Biochemistry**.
   * It explains how **chemical reactions** happen inside the body (e.g., digestion, respiration, photosynthesis).
2. **Molecules of Life:**
   * Living organisms are made up of **biological molecules**:
     + **Carbohydrates** (sugar, starch) → energy source.
     + **Proteins** (enzymes, muscles) → body building.
     + **Lipids** (fats, oils) → energy storage & insulation.
     + **Nucleic acids** (DNA, RNA) → genetic material.
   * All of these are studied in Chemistry.
3. **Enzymes & Metabolism:**
   * Enzymes (proteins) act as **biological catalysts** to speed up chemical reactions in cells.
   * Example: digestion of food into smaller molecules.
4. **Cell Chemistry:**
   * Every cell has **chemical reactions** going on (respiration, protein synthesis).
   * Without chemistry, biology cannot explain how cells survive.
5. **Medicines & Drugs:**
   * Chemistry helps in making **medicines** that cure diseases.
   * Biology explains how these medicines work in the human body.
6. **Photosynthesis & Respiration:**
   * Photosynthesis (plants making glucose from CO₂ + H₂O) is a **chemical process**.
   * Respiration (breaking glucose to release energy) is also chemistry inside living things.

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