



Chapter 1

Introduction to Chemistry



Introduction to Chemistry

Synopsis:

1. **Science:** "Science is the systematic effort by human being to study, understand and utilise nature for meaningful purposes. This understanding is slowly developed by careful observations and experiments."
2. **Chemistry:** "The branch of science that deals with the study of the composition, physical and chemical properties of various forms of matter is called chemistry."
3. **Fertilisers:** "Are the chemicals which provide nutrients to crops and increase their yield." e.g. Urea, calcium nitrate, sodium nitrate, potash, ammonium sulphate etc.
4. **Pesticides:** "Are the chemicals used to kill pests which affect the production of crops and fruits." e.g. Aldrin, Malathion, parathion etc.
5. **Insecticides** are the chemical used to kill insects, e.g. D.D.T. and B.H.C.
6. **Fungicides** are substances which protect the crops from fungi, e.g. Bordeaux mixture and sulphur act as fungicides.
7. **Hormones** are group of chemicals secreted in our body to control various activities.
8. **Enzymes** are the chemicals secreted by our body and react with food water and oxygen as raw material in mouth and intestines.

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9. Role of Chemistry: Without chemistry our life would have been dull, it has helped us in every field of life. The production of better and faster crops to meet the needs of such a huge population is possible only because of chemicals produced by chemistry, i.e. Pesticides, fungicides; insecticides preservatives help us to preserve food in a better state and of good taste for a long time.

In Industry : paints, drugs, fibres, soap, toothpaste, dyes plastics even fuels, atomic energy, petrol, diesel, kerosene, wax, paraffin rubber, acids, alkalis metals alloys are the gift of chemistry.

Medicines: Penicillin, Tetracycline, pain killers and various other antibiotics are used to kill germs and cure diseases.

Building and Daily Life: Building materials, items of daily use like, ink, pen, glass, sugar, common salt, paper.

10. Preservatives are the chemicals which maintain the taste for longer time and do not let the food degrade to produce obnoxious (unpleasant smell), e.g. sugar, common salt, sodium benzoate and sodium meta-bisulphate.

