SCIENCE
(Code No. 086)

CLASS IX

Deleted Portion (Theory)

- **Under Unit I: Matter-Nature and Behaviour**

  - **Matter in Our Surroundings:** Definition of matter; solid, liquid and gas; characteristics - shape, volume, density; change of state-melting (absorption of heat), freezing, evaporation (cooling by evaporation), condensation, sublimation.

- **Under Unit II:Organization in the Living World**

  - **Diversity in Living Organisms:**Diversity of plants and animals-basic issues in scientific naming, basis of classification. Hierarchy of categories / groups, Major groups of plants (salient features) (Bacteria, Thallophyta, Bryophyta, Pteridophyta, Gymnosperms and Angiosperms). Major groups of animals (salient features) (Non-chordates upto phyla and chordates upto classes).

- **Under Unit III: Motion, Force and Work**

  - **Floatation:** Thrust and Pressure. Archimedes' Principle; Buoyancy; Elementary idea of Relative Density.
  - **Sound:** Nature of sound and its propagation in various media, speed of sound, range of hearing in humans; ultrasound; reflection of sound; echo and SONAR. Structure of the Human Ear (Auditory aspect only).

- **Under Unit V: Food Production**

  - **Improvement in Food Resources:** Plant and animal breeding and selection for quality improvement and management; Use of fertilizers and manures; Protection from pests and diseases; Organic farming.

- **DELETED PRACTICALS**
  1. Separation of the components of a mixture of sand, common salt and ammonium chloride (or camphor).
  2. Determination of the melting point of ice and the boiling point of water.
  3. Verification of the Laws of reflection of sound.
  4. Determination of the speed of a pulse propagated through a stretched string/slinky (helical spring).
  5. Study of the characteristics of *Spirogyra, Agaricus*, Moss, Fern, Pinus (either with male or female cone) and an Angiospermic plant. Draw and give two identifying features of the groups they belong to.
  6. Observe the given pictures/charts/models of earthworm, cockroach, bony fish and bird. For each organism, draw their picture and record:
     a) one specific feature of its phylum.
     b) one adaptive feature with reference to its habitat.
  7. Study of the external features of root, stem, leaf and flower of monocot and dicot plants.

- **Internal Assessment**

Theme: Natural Resources: Balance in nature

Unit IV: Our Environment

Physical resources: Air, Water, Soil. Air for respiration, for combustion, for moderating temperatures; movements of air and its role in bringing rains across India.
Air, water and soil pollution (brief introduction). Holes in ozone layer and the probable damages.
Bio-geo chemical cycles in nature: Water, Oxygen, Carbon and Nitrogen.

CLASS X

Deleted Portion (Theory)

- **Under Unit I: Chemical Substances - Nature and Behaviour**
    - **Metals and Non-metals:** Basic Metallurgical processes; Corrosion and its prevention
    - **Carbon and its Compounds:** Nomenclature of carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkanes and alkynes), difference between saturated hydro carbons and unsaturated hydrocarbons. Chemical properties of carbon compounds (combustion, oxidation, addition and substitution reaction). Ethanol and Ethanoic acid (only properties and uses), soaps and detergents.
- **Under Unit II: World of Living**
    - **Control and co-ordination in animals and plants:** Tropic movements in plants; Introduction of plant hormones; Control and co-ordination in animals: Nervous system; Voluntary, involuntary and reflex action; Chemical co-ordination: animal hormones.
    - **Heredity and Evolution:**Basic concepts of evolution.
- **Under Unit III: Natural Phenomena**
    - **The Human Eye and the Colourful World:** Functioning of a lens inHuman eye, defects of vision and their corrections, applications of spherical mirrors and lenses.
- **Under Unit IV: Effects of Current**
    - **Magnetic Effects of Electric Current:** Electric Generator, Direct current. Alternating current: frequency of AC. Advantage of AC over DC. Domestic electric circuits.
- **Under Unit V: Natural Resources**

- **Sources of energy:** Different forms of energy, conventional and non-conventional sources of energy: Fossil fuels, solar energy; biogas; wind, water and tidal energy; Nuclear energy. Renewable versus non-renewable sources of Energy.

- **DELETED PRACTICALS**

1. Finding the pH of the following samples by using pH paper/universal indicator:
   - Dilute Hydrochloric Acid
   - Dilute NaOH solution
   - Dilute Ethanoic Acid solution
   - Lemon juice
   - Water
   - Dilute Hydrogen Carbonate solution
2. Determination of the equivalent resistance of two resistors when connected in series and parallel.
3. Preparing a temporary mount of a leaf peel to show stomata.
4. Study of the following properties of acetic acid (ethanoic acid):
   - Odour
   - solubility in water
   - effect on litmus
   - reaction with Sodium Hydrogen Carbonate
5. Study of the comparative cleaning capacity of a sample of soap in soft and hard water.
6. Finding the image distance for varying object distances in case of a convex lens and drawing corresponding ray diagrams to show the nature of image formed.
7. Identification of the different parts of an embryo of a dicot seed (Pea, gram or red kidney bean).

- **Internal Assessment**

- **Management of natural resources:** Conservation and judicious use of natural resources. Forest and wild life; Coal and Petroleum conservation. Examples of people's participation for conservation of natural resources. Big dams: advantages and limitations; alternatives, if any. Water harvesting. Sustainability of natural resources.