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Matter and Laws of Chemical Combinations Equivalent mass, formula mass and molecular mass, mole concept, empirical and molecular formulae.

Chemical Equations and Stoichiometry Stoichiometry and stoichiometric calculations, concentration of solutions and numerical practices.

Stoichiometry and stoichiometric calculations, concentration of solutions and numerical practices.

3. States of Matter : Gaseous and Liquid StatesGraham's law of diffusion, ideal gas, kinetic theory of gases, concept of molecular velocities, deviation from ideal gas behaviour, compressibility factor and van der Waals' equation.

4. States of Matter : Solid StateBragg's equation, unit cell, packing efficiency, defects in solids and magnetic properties.

5. Atomic StructureDual nature of electromagnetic radiation, Bohr's model, spectrum of H-atoms, quantum mechanical model,

quantum numbers and electronic configuration.

6. Radioactivity and Nuclear Chemistry Radioactivity, Half-life period and Nuclear fusion etc.

7. Chemical Bonding and Molecular Structure Concept of bond order, bond length and bond energy VSEPR theory, hybridisation, MOT.

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19. Hydrogen 651-664

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22. p-block Elements II (Group 15 & 16)

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23. p-block Elements III (Group 17 & 18)

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26. Environmental Chemistry

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Environmental pollution, tropospheric and particulate pollutants, stratospheric pollution, water and soil pollution.

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27. Purification of Organic Compounds

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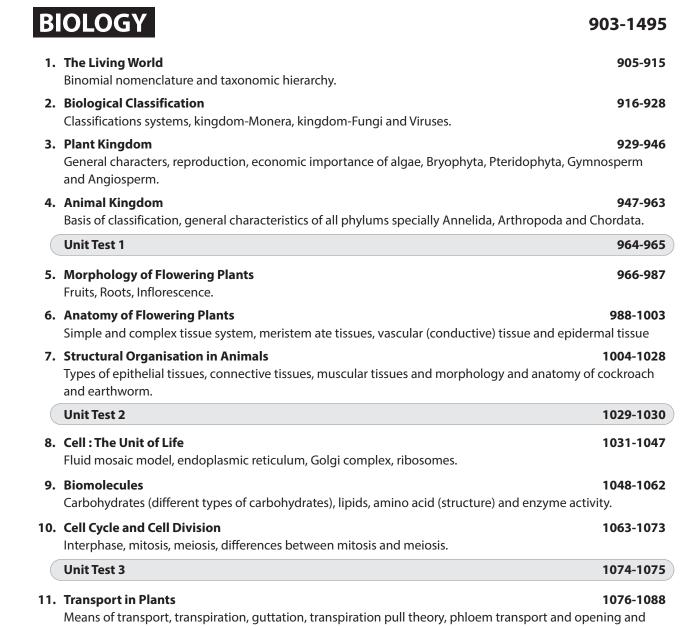
Monosaccharides, oligosaccharides, amino acids, essential and non-essential amino acids, structure of proteins, classification of vitamins and nucleic acids.

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