

**TRIPURA CHEMICAL SOCIETY**  
**SYLLABUS FOR CHEMISTRY APTITUDE TEST**

**Stage – I**  
**(Effective from 2017)**

**Unit – I: States of matter** – solid, liquid & gas; Changes in states of matter; melting point, boiling point, freezing point, condensation, sublimation, evaporation and latent heat; Concept of purity of matter, mixture, solution, types and concentration of solution, solubility, effect of temperature and pressure on solubility, colloids, types and properties of colloids, suspension and its properties; Separation of components of mixture; Element – metal, non metal and metalloid; compounds and their properties; physical and chemical changes; water purification.

**Unit – II: Atoms and Molecules** – basic idea, laws of chemical combinations, law of conservation of mass, law of constant proportions; Dalton's atomic theory, atomic mass and a.m.u, symbol and formula of element and molecules; ions – definitions and types; Avagadro's number & mole concept, empirical & molecular formula.

**Unit – III: Atomic structure** – basic idea, electron, proton & neutron discovery; Rutherford's atomic model, its drawbacks; Bohr's atomic model, distribution of electrons in shells, valency, atomic and mass number, isotope, isobar, isotone.

**Unit – IV: Natural resources** – needs of conservation; uses for sustainable development; Air and water – pollution, harmful effect, remedial measures, green house effect, ozone layer, global warming.

**Unit – V: Action of heat on compounds** – compounds of sodium, calcium, magnesium, copper, zinc etc.