

NTPC Assistant Chemist Trainee Syllabus 2016

Physical Chemistry

- Atomic Structure.
- States of Matter.
- Chemical Thermodynamics.
- Chemical and ionic Equilibrium.
- Redox Reactions.
- Phase equilibria & Solutions.
- Electrochemistry.
- Chemical Kinetics.
- Surface Chemistry.
- Nuclear Chemistry.

Organic Chemistry

- Basic Concepts in Organic Chemistry and Stereochemistry
- Qualitative and quantitative analysis and purification of organic compounds.
- Preparation, Properties and reactions of Alkanes, Alkenes, Alkynes
- Organic compounds with functional group containing halogens
- Organic compounds with functional group containing oxygen
- Organic compounds with functional group containing nitrogen
- Reactions of α , β unsaturated carbonyl and acids
- Polymers
- Reactions of Benzene and hetero cyclic compounds
- Urea and malonic ester
- Spectroscopy measurements including IR, UV, NMR (proton and carbon 13)
- Biomolecules – Carbohydrates, Protein, Vitamins, Nucleic Acid, Lipids, Hormones
- Environmental Chemistry
- Chemistry in everyday life

Inorganic Chemistry

- Mole Concept and stoichiometry
- Periodic Table
- Chemical Bonding
- Main Group Elements (S & P)
- Transition Elements and lanthanides
- Coordination compound
- Metallurgy including Ellingham diagram (basic)
- Analytical Chemistry
- B-inorganic Chemistry