

SYLLABUS

SEMESTER - I

PS 1103 PHARMACEUTICAL CHEMISTRY - I (Inorganic Pharmaceutical Chemistry)

An outline of methods of preparation, uses, sources of impurities, tests for purity and identity, including limit tests for iron, arsenic, lead, heavy metals, chloride, sulphate and special tests if any, of the following classes of inorganic pharmaceuticals included in Indian Pharmacopoeia.

1. Acids and Bases: Buffers, Water.
2. Gastrointestinal Agents: Acidifying agents, Antacids, Protectives and Adsorbents, Cathartics.
3. Major Intra-and Extra-cellular Electrolytes: Physiological ions. Electrolytes used for replacement therapy, acid-base balance and combination therapy.
4. Essential and Trace Elements: Transition elements and their compounds of pharmaceutical importance, Iron and haematinics, mineral supplements.
5. Cationic and anionic components of inorganic drugs useful for systemic effects.
6. Topical Agents: Protectives, Astringents and Anti-infectives.
7. Gases and Vapours: Oxygen, Anesthetics and Respiratory stimulants.
8. Dental Products: Dentifrice, Anti-caries agents.
9. Complexing and chelating agents used in therapy
10. Miscellaneous Agents: Sclerosing agents, expectorants, emetics, poisons and antidotes, sedatives etc. Pharmaceutical Aids Used in Pharmaceutical Industry. Anti-oxidants, preservatives, filter aids, adsorbents, diluents, excipients, suspending agents, colorants etc.
11. Inorganic Radio Pharmaceuticals: Nuclear radio pharmaceuticals, Reactions, Nomenclature, Methods of obtaining their standards and units of activity, measurement of activity, clinical applications and dosage, hazards and precautions.

PS 1103P PHARMACEUTICAL CHEMISTRY - I (LAB)

The background and systematic qualitative analysis of inorganic mixtures of up to four radicals. Six Mixtures to be analyzed, preferably by semimicro methods. At identification tests for pharmacopoeial inorganic pharmaceuticals and qualitative tests for cations & anions should be covered.

Recommended Books:

1. Inorganic Medicinal and Pharmaceutical Chemistry by Block, Roche, Soine, Wilson
2. Bentley and Driver's Text Book of Pharmaceutical Chemistry.
3. Pharmaceutical Chemistry – Inorganic by G.R.Chatwal.