

PHARMACEUTICAL CHEMISTRY-I

(Inorganic Pharmaceutical Chemistry)

PH. 1.7 THEORY

3 hours/week

UNIT -I

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.

Acids and Bases: Buffers, Water.

Gastrointestinal Agents: Acidifying agents (Dil HCl), Antacids(Aluminum hydroxide gel, Aluminum phosphate, Magnesium carbonate, Magnesium trisilicate, combination preparations), Protectives and Adsorbents, Cathartics (Magnesium sulphate), Emetics (Copper sulphate and Sodium potassium antimony tartrate).

UNIT -II

Essential and Trace Elements: Transition elements and their compounds of pharmaceutical importance, Iron and haematinics, mineral supplements.

Cationic and anionic components of inorganic drugs useful for systemic effects. Topical Agents : Protectives (Calamine, Zinc oxide, Talc, Titanium dioxide), Astringents (Alum, Zinc sulphate) and Anti-infective (Iodine, Povidone iodine Hydrogen peroxide, Chlorinated lime, Potassium permanganate, Silver nitrate, Boric acid).

UNIT -III

Gases and Vapours : Oxygen, Anaesthetics and Respiratory stimulants.

Dental Products: Dentifrices, Anti-caries agents.

Major Intra and Extra-cellular Electrolytes : Physiological ions, Electrolytes used for replacement therapy, acid-base balance and combination therapy.

UNIT -IV

Miscellaneous Agents: Sclerosing agents, expectorants, poisons and antidotes, sedatives etc. Pharmaceutical Aids - Anti-Oxidants, preservatives, filter aids, adsorbents, diluents, suspending agents, colorants etc.

Inorganic radio-pharmaceuticals: Nuclear radiopharmaceuticals, nomenclature, methods of obtaining their standards and units of activity, measurement of activity, clinical applications and dosage, hazards and precautions.