PHARMACEUTICAL CHEMISTRY-I (Inorganic Pharmaceutical Chemistry)

THEORY 3 hours / week Module - I

Study of sources of impurities, tests for purity and indentity, 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 including acids, bases, buffers and water.

Module - II

An outline of methods of preparation and uses of the following compound:

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

Module - III

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).

Module - IV

Gases and Vapours: Oxygen, Anaesthetics and Respiratory stimulants.

Dental Products: Ddentifrices, Anti-caries agents

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

Module - V

Miscellaneous Agents: Sclerosing agents, expectorants, poisons and antidotes, sedatives etc. Pharmaceutical Acids – 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.