

**SABBHAVNA COLLEGE OF MANAGEMENT & TECHNOLOGY  
VILLAGE JALALDIWAL, RAIKOT , LUDHIANA (PB)**

**Subject Name - Pharmaceutical Chemistry -1**

**Subject Code-1992**

**Theory**

1. General discussion on the following inorganic compounds including important physical and chemical properties, medicinal and Pharmaceutical uses, storage conditions and chemical incompatibility.

**A. Acids, bases and buffers -**

Boric acid, Hydrochloric acid, strong ammonium hydroxide, Calcium hydroxide, Sodium hydroxide and official buffers.

**B. Antioxidants -**

Hypophosphorous acid, Sulphur dioxide, Sodium bisulfate, Sodium meta-bisulfite, Sodium thiosulfate, Nitrogen and Sodium Nitrite.

**C. Gastrointestinal agents -**

1. Acidifying agents - Dilute hydrochloric acid
2. Antacids - Sodium bicarbonate, Aluminium hydroxide gel, Aluminium Phosphate, Calcium carbonate, Magnesium carbonate, Magnesium trisilicate, Magnesium oxide, combinations of antacid preparations.
3. Protective and Adsorbent - Bismuth subcarbonate and kaolin.
4. Saline cathartic - Sodium Potassium tartrate and magnesium Sulphate

**D. Topical Agents -**

1. Protective - Talc, Zinc oxide, Calamine, Zinc stearate, Titanium dioxide, Silicon polymers.
2. Antimicrobials and Astringents - hydrogen peroxide, potassium permanganate, Chlorinated lime, Iodine, solutions of iodine, Povidone - iodine, Boric acid, Borax silver nitrate, Mild silver protein, Mercury, Yellow mercuric oxide, Ammoniated mercury.
3. Sulphur and its compound - Sublimed sulphur, Precipitated sulphur, Selenium sulphide'
4. Astringents :- Alum and Zinc sulphate

**E. Dental products -**

Sodium fluoride, stannous fluoride, calcium fluoride, calcium carbonate, Sodium meta phosphate, dicalcium phosphate, Strontium chloride, Zinc chloride.

**F. Inhalants -**

Oxygen, Carbon dioxide, Nitrous oxide.

**G. Respiratory stimulants -**

Ammonium carbonate

**H. Expectorants and Emetics -**

Ammonium chloride, Potassium iodide, Antimony Potassium tartrate

**I. Antidotes -**

Sodium Nitrate

**2. Major Intra and Extracellular electrolytes**

- A. Electrolytes used for replacement therapy-sodium and its preparations, Potassium chloride

- and its preparations
- B. Physiological acid-base balance and electrolytes used-Sodium acetate, Potassium acetate, Sodium bicarbonate injection. sodium citrate potassium citrate, Sodium lactate injection, Ammonium chloride and its injection.
  - C. Combination of oral electrolyte powders and solutions.

**3. Inorganic Official compounds of Iron, iodine and calcium ferrous sulfate and calcium gluconate.**

**4. Radio pharmaceuticals and contrast media** - Radio activity-Alpha, Beta and Gamma Radiations, Biological effects of radiations, Measurements of radio activity, G.M. Counter Radio isotopes their uses, storage and precautions with special reference to the official preparations.

**5. Quality control of Drugs and pharmaceuticals** importance of quality control, significant errors, methods used for quality control of impurities in pharmaceuticals, Limit tests for Arsenic, chloride, sulphate, iron and Heavy metals.

**6. Identifications tests for cations and anions as per Indian Pharmacopoeia.**



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