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ANANTHAPURAMU**

<i>Subject</i>	<b>PHARMACEUTICAL INORGANIC CHEMISTRY LAB</b>	<i>Course Code</i>	15R00109	<i>Credits</i>
<i>Course year</i>	B. Pharmacy I year	<i>Semester</i>	I	2
<i>Practical</i>	4 hrs/week	<i>Tutorial</i>	NIL	
<i>End exam</i>	50 marks	<i>Internal</i>	25 marks	

**I. Experiments:**

- Limit tests for the following as per the procedure given in Indian Pharmacopoeia
  - Chlorides & Modifications in limit test for chlorides in potassium permanganate
  - Sulphates & Modifications in limit test for sulphates in potassium permanganate
  - Iron
  - Arsenic
- Balances and Weighing: Calibration of Pipette and Burette.
- Preparation and standardization of Hydrochloric acid solution (0.1N).
- Preparation and standardization of Potassium permanganate solution (0.1N).
- Preparation and purification of Boric acid.
- Preparation and purification of Potash alum.
- Assay of sodium bicarbonate and assay of Boric acid (Neutralization).
- Assay of calcium gluconate (or) any calcium compounds (Complexometry).
- Assay of copper sulphate (Redox titration).
- Assay of sodium acetate (Non-aqueous titration).
- Assay of ferrous sulphate (Oxidation-reduction / Redox titration).

**II. Demo/workshop**

Labelling, handling, storage of inorganic compounds, safety practices in laboratory, identification of anions and cations.

**III. Assignment/Seminar/Group Discussion**

- Radioactive metals in the environment and its importance
- Importance of inorganic compounds in cancer
- Different catalysts which are used in various organic preparations and their characteristics
- Inorganic metals used in biochemical functions and their role.

**References:**

- Practical pharmaceutical chemistry, Part-I, A.H.Beckett and J.B.Stenlake, The Athlone press, University of London, London.
- Inorganic chemistry, Gary L.Miessler and Donald A.Tarr, 3/e, Pearson education, New Delhi
- Inorganic pharmaceutical chemistry, P. Gundu Rao, Vallabh Prakashan, Delhi.
- Advanced Inorganic Chemistry, G.D.Tuli, Satya prakash, S.Chand 2006.
- Modern Inorganic chemistry by William L. Jolly Mc Graw-Hill, New York 1984
- Indian Pharmacopoeia 1996, 2007.

**List of Minimum Equipment Required:**

- Analytical balances
- Physical balances
- Suction pumps
- Oven
- Hot plates
- Water baths
- Distillation unit
- Limit test apparatus for arsenic