February 2009

[KU 701] **Sub. Code: 4161**

FIRST B.PHARM. DEGREE EXAMINATION
(ReRevised Regulations)Candidates admitted upto 2003-04
Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY
Q.P. Code : 564161

Time : Three hours **Maximum : 90 marks**

I. Essay Questions : Answer any TWO questions (2 x 20 = 40)

1. (**a)** Define Radioactivity. Write their types, detection and measurement of radio activity.
   (**b)** Describe in detail the limit test for arsenic with reaction.
   (**c)** Write the preparation and uses of silicagel.
2. (**a)** Give the preparation, assay and uses of halogen and nitrogen.
   (**b)** Write the test for purity of oxidising substance, Co2 and Co in oxygen.
3. (**a)** Write short notes on theory of indicator assay of neutralization method.
   (**b)** Write short notes on
   i) Magnesium trisilicate. **ii)** Dried Aluminium hydroxide gel.

II. Write Short Notes : Answer any EIGHT questions (8 x 5 = 40)

1. Define the terms : **a)** Test for purity. **b)** Quantitative analysis.
   c) Assay **d)** Molality **e)** Normality
2. Give the preparation, assay and uses of the following:
   a) Phosphorous. **b)** Calcium.
3. Write molecular formula and uses of the following:
   a) Ferric sulphate. **b)** Sodium thio sulphate **c)** Sodium edentate.
   d) Alumina. **e)** Hydrogen peroxide.
4. Write the principle involved in the limit test for lead as per I.P with suitable reaction.
5. Write the method of preparation and uses of the following compounds.
   a) Mayor's reagent. **b)** Nessler's reagent.
6. Write the test for purity of **a)** Iron in sodium metabisulphite.
   b) Acid absorption by magnesium trisilicate.
7. Write the chemical formula and complete the reaction.
   a) Sodium chloride + silver nitrate →
   b) Silver thiosulphate + hydrochloric acid →
   c) Disodium hydrogen phosphate + calcium chloride →
   d) Barium chloride + Dill. Sulphuric acid →
   e) Magnesium oxide + Water →
8. Write on the test for : **a)** Coarse particle in light kaolin.
   b) Ferric ion and reducing sugar in ferrous gluconate.
9. How to confirm the following inorganic substance.
   a) Magnesium. **b)** Barium. **c)** Ammonium. **d)** Nitrate. **e)** Bromate.
10. Write the short notes on co-ordination compounds.

III. Short Answers: Answer any FIVE questions (5 x 2 = 10)

1. Define covalent bond.
2. Write the preparation of sublimed sulphur.
3. Write the physical and chemical property of chlorinated lime.
4. Write the test for purity of alkalinity.
5. What is the identification test for sodium hydroxide?
6. What is the chemical formula of Benedict's reagent?
7. Write the medicinal uses of following.
   a) Calcium lactate.
   b) Soda lime.
   c) Iodine.
   d) Potassium Permanganate

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August 2009

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Time : Three hours **Maximum : 90 marks**

I. Essay Questions : Answer any TWO questions (2 x 20 = 40)

1. **a)** Describes the Mendeleeff's periodic table and mention the defects in Mendeleeff's periodic table.
   b) Discuss the principle and reaction of the limit test for arsenic.
2. **a)** Explain the various sources of impurities in pharmaceutical substances with examples.
   b) Give the test for purity of
   i) Iodides and bromides in sodium chloride.
   ii) Co and CO2 in oxygen.
3. **a)** Enumerate the official compounds of mercury and give the methods of preparation and assay of any two official compounds of mercury.
   b) Write Note on :
   i) Tartar emetic.
   ii) Aurous chloride.

II. Write Short Notes : Answer any EIGHT questions (8 x 5 = 40)

1. Discuss the Radio Pharmaceuticals of
   i) Sodium Iodide^{131} I.
   ii) Sodium phosphate 32p.
2. Give the methods of preparation and assay of borax.
3. Write the method of preparation and medicinal uses of selenium sulphide and precipitated sulphur.
4. Write Note on : Calamine.
5. Discuss the method of preparation of any one in-organic sedatives.
6. Give the principle of gravimetric methods of assay.
7. What happen when : Give the balanced chemical equation.
   i) Barium peroxide reacts with sulphuric acid.
   ii) Copper sulphate treated with potassium iodide in the presence of acetic acid.
8. Describe briefly about the theory of co-ordination of compound.
9. Give the method of preparation and uses of lithium aluminium hydride and periodic acid.
10. Write the properties method of preparation and assay of any one in organic iron deficiency anaemia.

III. Short Answers: Answer any FIVE questions (5 x 2 = 10)

1. Give the principle for the limit test for chloride.
2. Define radio activity and radio isotope.
3. Give the reason for the uses of citric acid and ammonia in the limit test for Iron.
4. Write the test for purity of oxidizing substances in oxygen.
5. Give the method of preparation and uses of Nessler's reagent.
6. Give the importance of polyhydric alcohol in the assay of boric acid.
7. Write the method of preparation and uses of ammonium chloride.

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