[KY 757]   Sub. Code: 4251

FIRST B.PHARM. DEGREE EXAMINATION

(Regulations 2009-2010) Candidates Admitted from 2009-10 onwards

Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code : 564251

Time : Three hours   **Maximum : 80 marks**

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

1. a) What are Antacids? Give the classification of Antacids?
   b) What are the qualities of an ideal antacid?
   c) Give the preparation, identification tests, assay and medicinal uses of dried Aluminium Hydroxide Gel.

2. a) Explain the properties of Alpha, Beta and Gamma Rays.
   b) How are Radioactivity measured?
   c) What are the clinical applications of Radio isotopes?

3. a) Explain about co-ordination compounds with suitable examples. Give the application of EDTA (Ethylene Diamine Tetra acetic Acid) in pharmacy and analysis.
   b) Explain the role of Electrolytes in Acid base therapy.
   c) Write the preparation, properties, identification tests and assay of compound sodium lactate injection.

II. Write Short Notes :   Answer any **SIX** questions.   **(6 x 5 = 30)**

1. Explain the principle of Arsenic limit test with reactions.
2. Give difference between purified water and water for injection. What are the tests done for these?
3. Give the properties and uses of Magnesia.
4. What are Saline cathartics? Give the preparation of Magnesium sulphate.
5. Write the tests for purity and assay of Calamine.
6. Write the properties and assay of chlorinated lime.
7. Explain about physiological acid-base balance.
8. What are the official preparations of calcium? Give the assay and uses of any one compound.

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

1. Give the molecular formula for   a) Ammonia Alum   b) Talc.
2. Complete and balance the following equations.
   a) $KM_nO_4 + KI + H_2SO_4 \rightarrow$
   b) $Na_2S_2O_3 + Hcl \rightarrow$
3. What are the medicinal uses of selenium sulphide?
4. Give the applications of sodium metabisulphite.
5. What are the reagents used in Iron Limit Test?
6. How Sodium Chloride injection is assayed?
7. What are the official compounds of Iron?

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FIRST B.PHARM. EXAMINATION

Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code : 564251

Time : Three hours   **Maximum: 100 Marks**

Answer ALL questions.

I. LONG ESSAYS   (2 x 20 = 40)

1. a) What is an antidote? Write the principle and procedure involved in the assay of sodium nitrite and charcoal. **(10)**
   b) Explain the theories of co-ordination compounds. **(10)**

2. a) Discuss the diagnostic and therapeutic applications of radio isotopes. Explain about artificial radio activity with examples. **(12)**
   b) Describe the preparation and properties of helium. **(8)**

II. SHORT NOTES   (8 x 5 = 40)

1. Write note on antimicrobials and mention the assay of boric acid.
2. Explain the principle involved in the limit test for sulphates and iron.
3. Explain the method of preparation and assay of calcium carbonate.
4. Classify topical agents with examples.
5. List the official compounds of sodium and give its uses.
6. Complete and balance the following equations:
   a. $2 NaCl + H_2SO_4 \rightarrow$
   b. $H_2S + SO_2 \rightarrow$
   c. $Na_2CO_3 + Ca(OH)_2 \rightarrow$
   d. $MgCO_3 + HCl \rightarrow$
   e. $Bi + HNO_3 \rightarrow$
7. Write about acid neutralizing capacity of antacids.
8. Give the method of preparation of milk of magnesia and its uses.

III. SHORT ANSWERS   (10 x 2 = 20)

1. Define dentifrices with examples.
2. Define normality and ORS.
3. Give the uses of penicillamine and 1, 10- phenanthroline.
4. Write note on assay of ammonium chloride.
5. Write a note on trace ions.
6. Give the physiological role of calcium and potassium.
7. Give the identification test for phosphates.
8. Define amphiprotic solvents with examples.
9. Write the composition of ringer's solution.
10. Define chelating agents with examples.

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FIRST YEAR B.PHARM. EXAM
Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY
Q.P. Code : 564251

Time : Three hours   **Maximum: 100 Marks**
        (180 Min)   Answer ALL questions in the same order.

I. Elaborate on:

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. a) Describe the method of preparation, assay and uses of aluminium hydroxide and boric acid. b) Explain one method for measuring radioactivity. What are the clinical applications of I^{131}, Co^{58} and Barium Sulphate?	19	33	20
2. a) Explain the principle and procedure involved in the arsenic limit test with the help of neat labeled diagram and mention the equations wherever necessary. b) What are antimicrobials? Classify on the basis of mechanism of action with examples.	19	33	20

II. Short notes on:

1. Discuss the principle involved in the assay of calcium gluconate.	3	8	5
2. Write the molecular formula, Preparation and uses of magnesium trisilicate and alum.	3	8	5
3. Explain on saline cathartics with examples.	3	8	5
4. Discuss on electrolytes used in combination therapy.	3	8	5
5. Write on oral rehydration salt.	3	8	5
6. Name one inorganic compound each for the following uses a) antacids b) protectives c) anti-microbials d) dentifrices g) expectorants f) antidote	3	8	5
7. Preparation and applications of EDTA and dimercaprol.	3	8	5
8. Explain the physiological role of iron and copper.	3	8	5

III. Short Answers on:

1. Write the difference between chelating and sequestering agents with an example.	1	5	2
2. What is the importance of limit test in pharmaceutical preparation?	1	5	2
3. Give the medicinal uses of selenium sulphide and charcoal.	1	5	2
4. Discuss the principle involved in the assay of ferrous gluconate.	1	5	2
5. Define ligand. Classify with examples.	1	5	2
6. Write the identification test for aluminium.	1	5	2
7. What are topical agents? Classify with examples.	1	5	2
8. Write the modified limit test for sulphate in potassium permanganate.	1	5	2
9. Why bleaching powder is stored in well closed containers?	1	5	2
10. What is radio opaque contrast medium? Give one example.	1	5	2

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FIRST YEAR B.PHARM. EXAM
Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY
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Time : Three hours   Maximum: 100 Marks
          (180 Min)

I. Elaborate on: **(2 x 2 0 = 40 marks)**

1. a) Explain about source and types of impurities.
   b) Define Limit test. Write the principle involved in the
   Limit test for Arsenic.
2. a) Write briefly about theory of Co-ordination compounds.
   b) Write the Application of Co-ordination compounds in pharmacy.
   c) Write notes on 10-Phenanthroline and Penicillamine.

II. Write notes on: **(8 x 5 = 40 marks)**
1. Write the preparation of primary and secondary
   standard solution.
2. Write notes on measurement and radioactive isotopes.
3. Define antacid. Write the preparation, identification, assay
   and uses of Magnesium hydroxide.
4. Write short notes on Alum.
5. Write the preparation, properties, identification, assay
   and uses of Potassium Permanganate.
6. Write the official preparation of Sodium chloride.
7. Write short notes on helium gas.
8. Give the details about activated charcoal.

III. Short Answers   **(10 x 2 = 20 marks)**
Define following:
1. Ligands.
2. Sedatives.
3. Radio opaque contrast medium.
4. Pharmacopoeia and Monograph.
5. Hypernatremia.
6. Impurity.
7. Osmotic laxative.
8. Anti caries agents.
9. Anti oxidant.
10. Assay.

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Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY
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Time: Three hours　　　　　　　　　　　　　　　　Maximum: 100 marks

I. Elaborate on:　　　　　　　　　　　　　　　　(2X20=40)

1. a) Explain the principle and procedure involved in the limit test for lead.
   b) Write in detail the preparation, properties, identification tests, assay and uses of oxygen.
2. a) Define and classify antacids. Explain the method of preparation, assay and uses of calcium carbonate.

   b) What are the saline cathartics and write their mechanism of action.

   Explain the method of preparation and assay of magnesium sulphate.

II. Write Short Notes on:　　　　　　　　　　　　(8 x 5 =40)

1. Define radiopharmaceuticals. Write about the diagnostic and therapeutic applications of radioisotopes.
2. Explain about Indian Pharmacopoeia and monograph with examples.
3. Write the principle involved in the assay, method of preparation and uses of boric acid.
4. Write a short note on the electrolytes used for replacement therapy.
5. Write the structure and applications of dimercaprol and pencillamine.
6. Write about astringents. Describe the preparation and assay of zinc sulphate.
7. Write a note on dental products and describe the role of fluorides as anticaries agent.
8. What are expectorants? Write the preparation and assay of ammonium chloride.

III. Short Answers:　　　　　　　　　　　　　　(10 x 2 =20)

1. Write a note on radioopaque contrast media.
2. Define sedatives with examples.
3. Write about adsorbents and protectives with examples.
4. How is acid neutralising capacity of aluminium hydroxide tested?
5. Define antidotes with examples.
6. Write about physiological role of potassium
7. Write about primary and secondary standards with examples.
8. Write a note on antioxidants with examples.
9. What are pM indicators?
10. Write about solutions of iodine.

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Time: Three hours   **Maximum: 100 marks**

I. Elaborate on: (2X20=40)

1. a) Describe about the Dental products.
    b) Classify antacids and write a note on acid neutralizing capacity of
       Aluminium hydroxide gel.
2. a) Explain the theory of Co-ordination compounds and give the
       applications of EDTA & Dimercapol.
    b) Write a note on Expectorants.

II. Write Short Notes on: (8 x 5 =40)

1. Give the preparation, properties and uses of Boric acid.
2. Define antidote and write a note on sodium nitrite.
3. Write about the acid base balance and its importance.
4. Write about the limit test for Arsenic.
5. Write the preparation and assay of oxygen.
6. What are saline cathartics and write about their preparation and uses.
7. Give an account on oral rehydration therapy.
8. Write a note on Monograph.

III. Short Answers: (10 x 2 =20)

1. Give the physiological role of Zinc and copper?
2. How will you carry out the limit test for chloride for potassium
    permanganate?
3. Define amphiprotic solvents with examples?
4. Write the examples for Sclerosing agents?
5. What are official compounds of iron?
6. Sodium thio sulphate + Iodine -----
7. Define the term Normality?
8. Write the official preparations of sodium chloride?
9. What is the use of citric acid in the limit test for iron?
10. Write the preparation of Titanium dioxide?

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FIRST YEAR B.PHARM. DEGREE EXAMINATION

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Q. P. Code: 564251

Time: Three Hours   **Maximum: 100 Marks**

Answer All Questions

I. Essay Questions: **(2 x 20 = 40)**

1. a) Explain about Pauling's Valence bond Theory.
   b) Discuss about the biological role of co-ordination compounds.

2. a) Define Acidifier. Write the method of preparation and assay of Na_2HPo_4.
   b) Write about the combination of Antacid preparation.

II. Short Notes: **(8 x 5 = 40)**

1. Explain Electrolyte combination therapy with examples.
2. What are the precautions to be observed while handling radio active materials?
3. Write the principle involved in the limit test for Iron.
4. Write notes on Dimethicone.
5. Write the method of preparation, assay and uses of Chlorinated lime.
6. Write about Physiological acid base balance and its importance.
7. Define Respiratory stimulant. Write the preparation and assay of any one drug.
8. Write notes on antidotes.

III. Short Answers: **(10 x 2 = 20)**

1. Write a note on water for injection.
2. Define suspending agent. Give an example.
3. What are antimicrobials? Write about their importance.
4. Give the uses of Iron dextran injection.
5. Explain the importance of test for purity.
6. What is the use of Hypertonic saline?
7. What are ideal antacid?
8. Write the composition and used of Magaldrate.
9. Write a note on Povidone Iodine.
10. Define valency.

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