February 2011

[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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August 2011

[KZ 4251] **Sub. Code : 4251**

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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[LB 4251] **AUGUST 2012** **Sub. Code: 4251**

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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[LC 4251] **FEBRUARY 2013** **Sub. Code: 4251**

FIRST YEAR B.PHARM. EXAM

Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code : 564251

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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(LD 4251) **AUGUST 2013** **Sub Code: 4251**

FIRST B.PHARM. EXAM

Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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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(LE 4251) **FEBRUARY 2014** **Sub Code: 4251**

FIRST B.PHARM. EXAM

Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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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[LF 4251] **AUGUST 2014** **Sub. Code: 4251**

FIRST YEAR B.PHARM. DEGREE EXAMINATION

Paper I – PHARMACEUTICAL INORGANIC CHEMISTRY

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 Na2HPo4.
   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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(LG 4251) **FEBRUARY 2015** **Sub Code: 4251**

B.PHARM. EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Essays: **(2 x 20 = 40)**

1. a) Define Radio activity and write a note on preparation, identification tests and use of any two radio pharmaceuticals.
   b) Describe about the limit test for Chloride and Sulphate.
2. a) Explain about antidotes.
   b) Write about any two pharmaceutical aids.

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

1. Write the preparation, properties and assay of Bleaching powder.
2. Give an account on anti-caries agents.
3. Write about oral rehydration salt.
4. Give short notes on Talc.
5. Write a note on Combination of antacids.
6. Write about Indian Pharmacopoeia and monograph
7. Write about the limit test for Iron.
8. Give an account on 1,10 phenanthroline and penicillamine.

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

1. Define Molarity.
2. Write the composition of Ringers solution.
3. Give the preparation and use of selenium Sulphide.
4. Define covalent bond.
5. Give an example of any two calcium compounds and its used.
6. Give the Storage condition for nitrous oxide.
7. Boric acid + Glycerol ----->
8. Define the term Ligand.
9. What is the use of lead acetate cotton wool in the limit test for arsenic?
10. Write the identification test for Sulphate.

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[LH 4251] **AUGUST 2015** **Sub. Code: 4251**

B.PHARM. DEGREE EXAMINATION

FIRST YEAR

PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

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

1. a) Define Limit test. Write the principle involved in the Limit test for Arsenic.
   b) Explain about source and types of impurities with examples.

2. a) Explain the properties of Alpha, Beta and Gamma Rays.
   b) Explain the various methods employed for the measurement of radio activity.
   c) What are the clinical applications of Radio isotopes?

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

1. Explain in detail the preparation of primary and secondary standard solutions.
2. Classify topical agents with examples.
3. Write a note on acid neutralizing capacity of antacids.
4. Write the test for purity and assay of Calamine.
5. What are Saline cathartics? Give the preparation of Magnesium sulphate?
6. Explain the properties and assay of Boric acid.
7. Explain about physiological acid-base balance.
8. Write short notes on helium gas.

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

1. Define normality and ORS.
2. Mention examples for sedative and expectorant.
3. What is radio opaque contrast medium?
4. Define Ligands. Give examples.
5. List the official compounds of sodium and give its uses.
6. Define Hypernatremia.
7. Mention examples of dentifrices and anti- caries agent.
8. What are the reagents used in Iron Limit Test?
9. Define Osmotic laxative. Give example.
10. What are the medicinal uses of selenium sulphide?

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(LI 4251) FEBRUARY 2016 **Sub Code: 4251**

B.PHARM. EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Essays: **(2 x 20 = 40)**

1. 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.
2. 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.

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

1. Explain the principle of Arsenic limit test with reactions.
2. Give the properties and uses of Magnesia.
3. Complete and balance the following equations:
   a. $C_4H_2FeO_4 + H_2SO_4 \rightarrow$
   b. $H_2S + SO_2 \rightarrow$
   c. $SrO + HCl \rightarrow$
   d. $FeCl_3 + NaF \rightarrow$
   e. $Na_2HPO_4 \rightarrow$
4. Write the preparation, properties, identification, assay and uses of Hydrogen peroxide.
5. Write short notes on Pharmacopoeia and Monograph.
6. Write the properties and assay of Chlorinated lime.
7. Explain about the preparation, assay and uses of the following:
   (a) Oxygen, (b) Sodium Citrate
8. What are the official preparations of Calcium? Give the assay and uses of any one compound.

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

1. Define Molarity.
2. Define Amphiprotic solvents with examples.
3. Write any two precautions to be observed while handling radio active materials.
4. Give the applications of Sodium Metabisulphite.
5. Mention examples for adsorbent and saline Catharitic.
6. Define Anti caries agents.
7. What are the official compounds of Iron?
8. Define Sclerosing agent. Give examples.
9. Mention the physiological role of Calcium and Potassium.
10. Define chelating agents with examples.

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(LJ 4251) AUGUST 2016 **Sub Code: 4251**

B.PHARM. EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Essays: **(2 x 20 = 40)**

1. a) What is an Antidote? Write the principle and procedure involved in the assay of sodium nitrite and sodium thiosulphate.
   b) Write note on medical gases. Explain any one in detail.
2. a) Explain about Co-ordination compounds with suitable examples. Give the application of EDTA in pharmacy and analysis.
   b) Explain the role of electrolytes in acid base balance.
   c) Write the preparation, properties, identification tests and assay of compound sodium lactate injection.

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

1. Explain the principle involved in the limit test for sulphates and iron.
2. Define the terms with examples.
   a) Antacid b) Astringent c) Laxative d) Anti septic (e) Disinfectant.
3. Give the method of preparation of milk of magnesia and its uses.
4. Write short note on silicone polymers.
5. Explain the method of preparation, identification test, and uses of calcium carbonate.
6. Define modern periodic table and write its merits and demerits.
7. What are the qualities of an ideal antacid?
8. Write notes on antimicrobials and mention the assay of Hydrogen peroxide.

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

1. Define Anti oxidant.
2. Define Valancies of elements.
3. What are respiratory stimulant? Give the uses of ammonium carbonate.
4. Write the structure of 1,10 - Phenanthridine and mention its use.
5. Write the composition of Ringer's solution.
6. Write the reactions involved in the assay of KBr.
7. List the official compounds of magnesium and give its uses.
8. Define Dentifrices with examples.
9. Write the method of preparation of activated dimethicone.
10. What are the medicinal uses of talc?

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(LK 4251) FEBRUARY 2017 **Sub Code: 4251**

B.PHARM. EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Elaborate on: **(2 x 20 = 40)**

1. a) What are the sources of impurities in pharmaceutical substances? Explain the principle for the limit test for sulphates.
   b) What are antimicrobials? Write the preparation and assay of chlorinated lime and boric acid.
2. a) What are gastrointestinal agents? Classify them with examples. Describe about qualities of an ideal antacid and combination therapy of antacids.
   b) Write about theory of coordination compounds with special reference to application in pharmacy and pharmaceutical analysis.

II. Write notes on: **(8 x 5 = 40)**

1. What are medicinal gases? Write properties and assay of nitrous oxide.
2. What are radiopharmaceuticals? Write their clinical applications.
3. What are dentrifices? Write the preparation and assay of calcium carbonate.
4. Write about physiological acid-base balance and its importance.
5. Discuss about the development of periodic table on the modern concept of atomic structure and its importance.
6. What are saline cathartics? Write the preparation and assay of magnesium sulphate.
7. Write the method of preparation, assay and uses of ferrous sulphate.
8. Write the principle involved in the limit test for lead.

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

1. Write about protophilic solvents with examples.
2. Give the physiological role of potassium.
3. Write a note on complexometry titration with examples.
4. Define acidifiers with examples.
5. Write about radio opaque contrast medium.
6. Write the structure and uses of dimercaprol.
7. Define antidotes with examples.
8. Write a note on alum.
9. Define sclerosing agents with examples.
10. Write about calamine.

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(LL 4251) AUGUST 2017 **Sub Code: 4251**

B.PHARM. DEGREE EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Elaborate on: **(2 x 20 = 40)**

1. a) What are limit tests? Explain the types of impurities present in pharmaceuticals.
   b) Enumerate the principle and procedure involved in the limit test for arsenic.

2. What are Anti-microbials? Discuss the method of preparation, properties, assay and uses of: a) Iodine b) Silver Nitrate.

II. Write notes on: **(8 x 5 = 40)**

1. Write note on 1, 10 - Phenanthroline and EDTA.
2. Illustrate the preparation and properties of Helium gas.
3. Discuss on electrolytes used in combination therapy.
4. State the physiological role of iron and copper.
5. Define expectorant. Write the preparation and assay of ammonium chloride.
6. Give in detail about Pharmacopoeia and Monograph.
7. Write short notes on radio opaque contrast media.
8. Write a note on dental products and describe the role of fluorides as anti-caries agent.

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

1. Write the official compounds of sodium along with its uses.
2. How will you assay calcium gluconate?
3. Give the identification test for sulphate and barium.
4. Define chelating agents with examples.
5. Write about the solutions of iodine.
6. Give difference between purified water and water for injection.
7. Write the preparation and use of titanium dioxide.
8. Define osmotic laxative. Give example.
9. Give the preparation and use of selenium sulphide.
10. What are sedatives? Give examples.

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(LM 4251) FEBRUARY 2018 **Sub Code: 4251**

B.PHARM. DEGREE EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Elaborate on: **(2 x 20 = 40)**

1. a) Explain the methods for measurement of radioactivity.
   b) Discuss the diagnostic and therapeutic applications of radio isotopes.
   c) Detail about artificial radio activity.

2. a) Define and classify antacids. Write about the combination therapy of antacid.
   b) Write the method of preparation and assay involved in Aluminium hydroxide gel.
   c) Acid neutralizing capacity.

II. Write notes on: **(8 x 5 = 40)**

1. Explain the principle and procedure involved in the limit test for lead.
2. Define saline cathartic? Write the method of preparation and assay for any two drugs.
3. Give in detail about ORS.
4. Write note on acid base balance.
5. Write the physiological role of Iron and Selenium.
6. Write about Iron Dextran injection.
7. Write the structural formula and uses for the followings:
   a) Chlorinated lime b) Green vitriol c) Alum
   d) Milk of magnesia e) Precipitated chalk
8. What are the official preparations of Calcium? Give the preparation, assay and uses of any one compound.

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

1. Write the assay and storage condition of oxygen.
2. Give one example and structure of the compound from the following category:
   a) Sclerosing agents b) Expectorants c) Respiratory stimulant d) Antidotes
3. Give some official compounds of Iron.
4. Define dentifrices with examples.
5. Brief about Dimethicone.
6. What are the compositions present in Ringer's solution?
7. Write about Indian Pharmacopoeia.
8. Classify topical agent with examples.
9. Define the terms: Molarity and Normality.
10. What is sterile water for injection?

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LN 4251) AUGUST 2018 **Sub Code: 4251**

B.PHARM. DEGREE EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Elaborate on: **(2 x 20 = 40)**

1. a) Define Topical agents. Classify them with examples. Write about the different solutions of Iodine.
   b) Write short note on Alum.

2. Give the preparation, identification tests, assay and medicinal uses of :
   a) Hydrogen peroxide b) Chlorinated lime

II. Write notes on: **(8 x 5 = 40)**

1. What are medicinal gases? Write properties and assay of nitrous oxide.
2. What are saline cathartics? Write the preparation and assay of magnesium sulphate.
3. Write the principle for lead limit test with reactions.
4. What is radioactivity? Explain a method for the measurement of radioactivity.
5. What are dental products? Write about the role of fluorides as ant-caries agents.
6. Write the structures and applications of dimercaprol and penicillamine.
7. How will you assay ammonium chloride?
8. Define an antacid. Write the preparation and assay of sodium bicarbonate.

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

1. What is radio opaque contrast medium? Give examples.
2. Write about respiratory stimulants.
3. What are sedatives? Give example.
4. Write the physiological role of zinc.
5. Discuss about primary standards. Give examples.
6. What is Werner’s co-ordination number?
7. Define astringents with examples.
8. What are adsorbents? Give examples.
9. Write a note on oral rehydration salt.
10. Write about the different types of “waters” available as pharmaceutical aids.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LO 4251) FEBRUARY 2019 **Sub Code: 4251**

B.PHARM. DEGREE EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Elaborate on: **(2 x 20 = 40)**

1. Define Limit test. Briefly explain about the principle and procedure involved in limit test for Arsenic with neat diagram.

2. a) Define Antacid. Classify them with suitable examples.
   b) Describe in detail about Aluminium hydroxide gel.

II. Write notes on: **(8 x 5 = 40)**

1. Primary and secondary standard.
2. Saline Cathartics.
3. Hydrogen peroxide.
4. Anti-Caries agents.
5. Official preparation of Sodium Chloride.
6. Oral Rehydration salts.
7. Oxygen.
8. Respiratory stimulant.

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

1. What is adsorbent and protectives? Give the examples.
2. Write the assay of boric acid.
3. Define Oedema.
4. Write about the solution of iodine.
5. Write the storage condition of Carbon dioxide gas.
6. Write the properties of talc.
7. Define test for purity.
8. Give the identification test for calcium and sulphate.
9. Write the preparation for Sodium acetate.
10. Define Sedatives with examples.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LP 4251) AUGUST 2019 **Sub Code: 4251**

B.PHARM. DEGREE EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Elaborate on: **(2 x 20 = 40)**

1. a) Explain about the types of radiation, storage and precaution of Radioactive Substance.
   b) Write note on Radio Opaque Contrast Medium.

2. a) Briefly explain about the source of Impurities.
   b) Write note on limit test for Lead.

II. Write notes on: **(8 x 5 = 40)**

1. Define Acidifier. Write short notes on Ammonium Chloride.
2. Write note on Acid Neutralizing Capacity.
3. Give a note on Titanium dioxide.
4. Write short notes on Potash Alum.
5. Write note on Calcium gluconate.
6. Describe in detail on physiological role of Iron.
7. Write note on Helium gas.
8. Write detail note on Expectorants.

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

1. Assay.
2. Ideal antacid.
3. Astringent.
4. Disinfectants.
5. Anti-Oxidant.
6. Sclerosing agent.
7. Ligands.
8. Hypernatrimia.
9. Aprotic Solvents.
10. Lugol’s Solution.

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THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

(LQ 4251) FEBRUARY 2020 **Sub Code: 4251**

B.PHARM. DEGREE EXAMINATION
FIRST YEAR
PAPER I – PHARMACEUTICAL INORGANIC CHEMISTRY

Q.P. Code: 564251

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

I. Elaborate on: **(2 x 20 = 40)**

1. a) Define Saline Cathartics. Explain the method of preparation and assay of milk of magnesia.
   b) Define Antimicrobial and classify on the basis of mechanism of action. Discuss the method of preparation and assay of Hydrogen peroxide and Silver nitrate.

2. a) Define Medicinal gases. Write the preparation and assay of oxygen and helium gases.
   b) Define antidote. Write the preparation and assay of sodium nitrite and charcoal.

II. Write notes on: **(8 x 5 = 40)**

1. Write about the electrolytes used in the acid-base therapy with examples. Write the preparation and assay of any two electrolytes.
2. Write the preparation, identification tests and assay of compound sodium lactate injection.
3. Differentiate between purified water and water for injection and write the tests made for those.
4. Write short notes on Pharmacopoeia.
5. Define and explain the physiological role of some trace ions.
6. Note on combinations of antacid therapy. Give the preparation, identification tests and assay of calcium carbonate.
7. Explain the principle, procedure involved in the modified limit test for sulphate.
8. Define respiratory stimulant. Give the method of preparation and assay for the compound from it.

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

1. Define the terms Hypernatremia and Hyperkalemia, how will you treat this condition?
2. What are the primary and secondary standard solutions?
3. Define complexometric titration with examples.
4. Define and write the types of limit test.
5. Discuss the physiological role of zinc and copper.
6. Give the molecular formula and uses for the following:-
   i) Amphojel ii) Baking soda.
7. Explain the use of thioglycollic acid in the limit test for iron.
8. Write the identification test for Ammonium and Chloride.
9. Write the principle and reaction involved in the limit test for chloride.
10. What are the characters of an ideal antacid?

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