Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BPHARM – SEMESTER – I • EXAMINATION – WINTER 2012

Subject code: 2210002 **Date: 11-01-2013**

Subject Name: Pharmaceutical Chemistry-I (Inorganic chemistry)

Time: 02:30 pm – 05:30 pm **Total Marks: 80**

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	(a)	Define and explain the following terms. (i) Antacids (ii) Antiseptic (iii) Emetics (iv)Pharmaceutical aids (v) Buffers (vi) Limit test	**06**
	(b)	Define and classify topical agents with suitable examples. Give Preparation, Properties, uses and assay principle of Zinc oxide.	**05**
	(c)	Enlist the sources of the impurities in Pharmaceuticals and discus the manufacturing hazards as source of impurity.	**05**
Q.2	(a)	Distinguish between. 1. Hypochlorhydria and Hyperchlorhydria. 2. Water for injection and sterile water for injection.	**06**
	(b)	Explain the mechanism of action of inorganic antimicrobial agents.	**05**
	(c)	Discuss electrolyte used for replacement therapy and essential ions.	**05**
Q.3	(a)	Explain principle of limit test for iron and arsenic.	**06**
	(b)	Discuss physiological acid-base balance and give a note on sodium bicarbonate as an electrolyte used in acid-base therapy.	**05**
	(c)	Write Assay Principle and chemical reaction of following 1. Ammonium chloride 2. Boric acid	**05**
Q.4	(a)	Comment on the following statements: 1.Potassium iodide is added in aqueous iodine solution. 2. Glycerin is added in assay of Boric acid. 3. Aqueous Ammonia is added in limit test of lead	**06**
	(b)	Write down various clinical applications of radiopharmaceuticals.	**05**
	(c)	Describe ion exchange resin method for softening hard water.	**05**
Q.5	(a)	Give the synonyms and uses of the following. 1. Precipitated chalk 2.Lunarcaustic 3. Rochelle salt 4. Alum 5.Graham's salt 6. Green vitriol.	**06**
	(b)	Write composition of various iodine preparations.	**05**
	(c)	Discuss the biological significance of calcium.	**05**
Q. 6	(a)	Explain the following terms. 1. Preservative 2. Expectrorant 3. Deliquesant	**06**
	(b)	Classify dental products with suitable examples. Discuss the role of fluoride in preventing tooth carries. Give a brief account of zinc chloride as a dental product.	**05**
	(c)	What are Radio-pharmaceuticals? Give uses of Iron [59Fe], Na 131I and Cynocobalamine [57Co].	**05**
Q. 7	(a)	Write a note on- combinations of antacid preparations.	**06**
	(b)	Give an account on method of preparation and uses of hydrochloric acid.	**05**
	(c)	Discuss complexing agents used in therapy.	**05**

****