

**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. **06**  
 (i) Antacids (ii) Antiseptic (iii) Emetics (iv) Pharmaceutical aids  
 (v) Buffers (vi) Limit test
- (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 discuss the manufacturing hazards as source of impurity. **05**
- Q.2** (a) Distinguish between. **06**  
 1. Hypochlorhydria and Hyperchlorhydria.  
 2. Water for injection and sterile water for injection.
- (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 **05**  
 1. Ammonium chloride 2. Boric acid
- Q.4** (a) Comment on the following statements: **06**  
 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
- (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. **06**  
 1. Precipitated chalk 2. Lunarcaustic 3. Rochelle salt  
 4. Alum 5. Graham's salt 6. Green vitriol.
- (b) Write composition of various iodine preparations. **05**
- (c) Discuss the biological significance of calcium. **05**
- Q. 6** (a) Explain the following terms. **06**  
 1. Preservative 2. Expectorant 3. Deliquescent
- (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 [<sup>59</sup>Fe], Na <sup>131</sup>I and Cynocobalamine [ <sup>57</sup>Co]. **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**

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