

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Diploma Pharmacy First Year Examination May 2010**

**Subject code: 410002**

**Subject Name: Pharmaceutical Chemistry-I**

**Date: 20 / 05 / 2010**

**Time: 11.00 am – 02.00 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) What do you mean by impurity? What is the effect of impurity on substances when present above limits? Explain the limit test of arsenic with labelled diagram and giving the reactions and role of reagents used. **10**
- (b) Discuss the sources of impurities in Pharmaceutical. **06**
- Q.2** (a) Explain Bronsted-Lowery acid–base theory and explain the conjugate acid-base pair with example. **06**
- (b) What do you mean by buffer solutions and buffer capacity? **01**
- (c) Describe the preparation, uses and Assay principle of Boric acid and strong solution of Ammonia. **09**
- Q.3** (a) Define the following terms:- **05**
- (i) Decrepitation (ii) Antiseptic (iii) Antioxidant  
(iv) Adsorbent (v) Astringent
- (b) Give the name of any compound used as:- **05**
- (i) Antioxidant (ii) Emetic (iii) Expectorant  
(iv) Desensitizing agent (v) Hematinic
- (c) Give the chemical name, structural formula and use of the following:- **06**
- (i) Green Vitriol (ii) Rochelle salt (iii) Epsom salt (iv) Alum  
(v) Baking soda (vi) Bleaching Powder
- Q.4** (a) What are antacids? State the requirements for an ideal antacid. **05**
- (b) Give method of preparation and uses of milk of magnesia and aluminum hydroxide gel. **06**
- (c) Classify the Dental products, giving examples of it. **05**
- Q.5** (a) What are topical agents? Classify topical agents, giving examples. **05**
- (b) Discuss the various mechanism of action of inorganic antimicrobial agents. **05**
- (c) Describe the preparation and uses of Potassium Permanganate and Selenium Sulphide. **06**
- Q.6** (a) Enumerate the official compounds of Iron. Discuss preparation and uses of Ferrous Fumarate and Ferric Ammonium citrate. **06**
- (b) What do you mean by antidotes? Discuss the mechanism of antidotes in poisoning. **05**
- (c) Describe the conditions leading to Hypokalemia and Hyperkalemia. **05**
- Q.7** Write short notes on :- **(Any Four)** **16**
- (a) ORS  
(b) Limit Test of Iron  
(c) Inhalants  
(d) Respiratory Stimulants  
(e) Radio opaque-contrast media  
(f) Geiger-Muller Counter

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