

**GUJARAT TECHNOLOGICAL UNIVERSITY**

B. Pharmacy Sem-I Remedial examination March 2009

Subject code: 210003

Subject Name: Pharm Chemistry-I

Date: 17 / 03 / 2009

Time: 10:30am-1:30pm

**Instructions:**

Total Marks: 80

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

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|------|-----|---|----|
| Q.1  | (a) | Define the term impurity. Discuss importance of limit test in pharmacy. Explain the principle involved in the limit test of arsenic giving the reactions and role of reagents used.   | 10 |
|      | (b) | Discuss the sources of impurities in pharmaceuticals.   | 06 |
| Q.2  | (a) | Explain Bronsted-Lowery acid-base theory. What is a conjugate acid and base.  | 05 |
|      | (b) | What is meant by physiological buffers ? Describe the mechanism of maintaining pH of blood.   | 06 |
|      | (c) | Discuss biological importance of calcium ions and their deficiency symptoms.  | 05 |
| Q.3  | (a) | Define the following terms:<br>(i) Emetic (ii) Sclerosing agent (iii) Suspending agent.<br>(iv) Preservative. (v) Adsorbent   | 05 |
|      | (b) | Give the name and structure of any one compound used as<br>(i) Astringent. (ii) Purgative. (iii) Emetic.<br>(iv) Hematinic (v) Expectorant  | 05 |
|      | (c) | Give the chemical name, structural formula and use of the following.<br>(i) Baking soda. (ii) Chlorinated lime. (iii) Epsom salt.<br>(iv) Green vitriol. (v) Lunar caustic. (vi) Alum | 06 |
| Q.4  | (a) | Classify inorganic compounds acting as gastrointestinal agents giving examples.   | 05 |
|      | (b) | What are antacids? Outline the ideal requirements of an antacid.  | 05 |
|      | (c) | Give methods of preparation and use of aluminum hydroxide gel and milk of magnesia.   | 06 |
| Q.5  | (a) | What are topical agents ? Classify topical agents giving examples.  | 05 |
|      | (b) | Explain the mechanism of action of inorganic antimicrobial agents.  | 05 |
|      | (c) | Describe the preparation and uses of potassium permanganate and Calamine lotion.  | 06 |
| Q. 6 | (a) | Enumerate official compounds of Iron. Give preparation and uses of ferrous gluconate and ferric ammonium citrate.   | 06 |
|      | (b) | What are intra and extra cellular electrolytes? What is meant by oral rehydration therapy?  | 05 |
|      | (c) | What are antidotes? What is the mechanism of action of antidote in poisoning ?  | 05 |
| Q.7  |     | Write short notes on: ( Any FOUR )  | 16 |
|      | (a) | Anticaries agents.  |    |
|      | (b) | Antioxidants.   |    |
|      | (c) | Limit test of Iron.   |    |
|      | (d) | Inhalants.  |    |
|      | (e) | Respiratory stimulants  |    |
|      | (f) | Povidone iodine.  |    |

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