

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:
(i) Emetic (ii) Sclerosing agent (iii) Suspending agent.
(iv) Preservative. (v) Adsorbent | 05 |
| | (b) Give the name and structure of any one compound used as
(i) Astringent. (ii) Purgative. (iii) Emetic.
(iv) Hematinic (v) Expectorant | 05 |
| | (c) Give the chemical name, structural formula and use of the following.
(i) Backing soda. (ii) Chlorinated lime. (iii) Epsom salt.
(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: (<i>Any FOUR</i>) | 16 |
| | (a) Anticaries agents. | |
| | (b) Antioxidants. | |
| | (c) Limit test of Iron. | |
| | (d) Inhalants. | |
| | (e) Respiratory stimulants | |
| | (f) Povidone iodine. | |
