

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Pharmacy First Year Remedial Examination September 2009****Subject code: 410002****Subject Name: Pharmaceutical Chemistry-I****Date: 18/09/2009****Time: 02:30pm-5:30pm****Instructions:****Total Marks: 80**

- 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 impure chemical compound? Discuss the sources of impurities in pharmaceuticals. **08**
(b) With a well labeled diagram and chemical reactions involved, discuss the limit test for 'Arsenic' **08**
- Q.2** (a) Enlist various gastrointestinal disorders. Classify gastrointestinal agents with chemical formula. **04**
(b) Discuss various concepts of acid and base briefly. **06**
(c) Discuss how physiological acid-base balance of the body is maintained? **06**
- Q.3** Discuss the method of preparation, assay principle and uses of following **16**
(Any Four).
(a) Boric Acid
(b) Sodium Thiosulphate
(c) Hydrogen Peroxide
(d) Ammonium Chloride
(e) Ferrous Sulphate
- Q.4** (a) Define and classify topical agents with chemical formula. **04**
(b) Define following giving name and chemical formula of compounds used as
i) Inhalants ii) Respiratory stimulant iii) Emetics iv) Expectorant **06**
(c) How iodine is obtained and purified from natural source? Discuss various official preparations of iodine. **06**
- Q.5** (a) Define buffer. Explain mechanism of action of acidic buffer giving suitable example. **04**
(b) Write a note on electrolyte combination therapy. **04**
(c) Define antioxidant. Give various important criteria for selection of antioxidant. Enlist various antioxidants with chemical formula. **04**
(d) Enlist major intra and extra cellular electrolytes. Discuss the important biological function of sodium ion in the body. **04**
- Q.6** (a) Give identification test for following as per IP **(Any Four)** **04**
i) Benzoate ii) Sulphate iii) Ferric
iv) Silver v) Iodine vi) Bicarbonate
(b) Discuss the biological importance of calcium. Enlist official compounds of Calcium. **04**
(c) Define Radioisotopes. Discuss the storage and handling of radioactive material. **04**
(d) Write a note on dental products. **04**
- Q.7** Write short note on following **(Any Four)** **16**
(a) Limit test for chloride.
(b) Antidote.
(c) Saline cathartics.
(d) Complexometric titration.
(e) Geiger-Muller
