

GUJARAT TECHNOLOGICAL UNIVERSITY**D.Ph. - SEMESTER-I • EXAMINATION – SUMMER 2013****Subject Code: 410002****Date: 13-05-2013****Subject Name: Pharmaceutical Chemistry - I****Time: 10.30 am - 01.30 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) Explain bronsted acid - base theory. Give the mechanism of buffer action. 06
- (b) Give the preparation, properties, assay principle and uses of boric acid. 05
- (c) Discuss various buffer systems present in body. 05
- Q.2** (a) Define limit test? Give the principle and procedure for the limit test for sulphate. 06
- (b) What is impurity? Describe the sources of impurities in pharmaceuticals. 05
- (c) Give the principle of limit test of arsenic. 05
- Q.3** (a) What is antacid? List the compounds of aluminium and magnesium used as an antacid. Give the method of preparation and uses of calcium carbonate. 06
- (b) What are anti-microbials? Give the mechanism of its action. 05
- (c) Define the following terms: 05
- i. Achlorhydria
- ii. Normality
- iii. Saline cathartics
- iv. Isotopes
- v. Laxatives
- Q.4** (a) Classify the inorganic compounds used as topical agents with examples. Describe the various preparations of iodine. 06
- (b) Give the principle involved in the assay of copper sulphate and chlorinated lime. 05
- (c) Discuss the storage and labeling condition required for oxygen, carbon dioxide and nitrous oxide. 05
- Q.5** (a) Write the method of preparation and assay principle of hydrogen peroxide and potassium permanganate. 06
- (b) Write a short note on: 05
- i. Respiratory stimulant
- ii. Expectorant
- (c) Describe the role of fluoride and phosphate in the dental hygiene. 05

- Q. 6** (a) Define antidote. Give the mechanism of its action. Discuss the treatment of cyanide poisoning. **06**
- (b) What is intra and extra cellular fluids? Write a note on oral rehydration salt. **05**
- (c) Define the following terms and give one example of it: **05**
- i. Emetics
 - ii. Astringents
 - iii. Acidifiers
 - iv. Pharmaceutical buffers
 - v. Adsorbents
- Q.7** (a) What is radioactivity? How it is measured? Give the applications of radioactivity in pharmacy. **06**
- (b) Explain quality control and significant errors. **05**
- (c) What are antioxidants? Discuss the mechanism of its action. **05**
