

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm Sem-I Examination January 2010

Subject code: 210003

Subject Name: Pharmaceutical chemistry - I

Date: 04 / 01 / 2010

Time: 12.00 – 3.00 pm

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 impurities? Explain the importance of limit test in Pharmaceutical Preparation. Explain the principle of limit test for Iron. **06**
- (b) Define following terms with illustration **05**
1. Respiratory stimulant 2. Sedative 3. Suspending agent
4. Cathartics 5. Pharmaceutical aids
- (c) Give the synonyms and uses of following **05**
1. Common salt 2. Chlorinated lime 3. Baking soda
4. Rochelle salt 5. Slaked lime
- Q.2**
- (a) Discuss the factors affecting selection of Pharmaceutical buffers and name any two physiological buffers and two analytical buffers. **06**
- (b) Write Assay Principle and chemical reaction of following **06**
1. Zinc oxide 2. Boric acid 3. Ammonium chloride
- (c) What is meant by **04**
1. Official Compound 2. Pharmacopoeia 3. Buffer solution
4. Hard water
- Q.3**
- (a) Classify antimicrobial agents with example and discuss its mechanism of action **06**
- (b) Write the storage condition **05**
1. Oxygen 2. Phosphoric acid 3. Silver Nitrate 4. Iodine
- (c) Write a note on **05**
1. Dental Products 2. Antidotes
- Q.4**
- (a) Comment on following **06**
1. Manganese dioxide is used in preparation of iodine from kelp.
2. Glycerin is added in assay of Boric acid.
3. Aqueous Ammonia is added in limit test of lead
- (b) Classify following **05**
1. Saline cathartics 2. Antioxidants
- (c) Explain the following terms **05**
1. Astringent 2. Emetics 3 Hygroscopic
4. Deliquescence 5. Efflorescence
- Q.5**
- (a) Distinguish between **06**
1. Poison and Antidote
2. Hypochlorhydria and Hyperchlorhydria
3. Hypokalemia and Hyperkalemia

- (b) Name the compounds which is used as **05**
 1. Anticoagulant 2. Expectorant 3. General anesthetic
 4. Heamatinic 5. Fire extinguisher
- (c) Discuss **05**
 1. Electrolyte used for replacement therapy
 2. Essential ions
- Q. 6** (a) Write Preparation of following **06**
 1. Sodium thiosulphate 2. Sodium hydroxide
 3. Calcium gluconate
- (b) Give preparation of 5% w/v aqueous solution of iodine. Give the reasons for the reagents used in preparation. **05**
- (c) Enlist the sources of the impurities in Pharmaceuticals and discuss the manufacturing hazards as source of impurity. **05**
- Q.7** (a) What are Radiopharmaceuticals ? Give uses of Iron [^{59}Fe], Na ^{131}I and Cynocobalamine [^{57}Co]. **06**
- (b) Write a note on purified water and water for injection **05**
- (c) What are ideal requirement of antacids. Give preparation and uses of any one antacid. **05**
