

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
