Seat No.: _____ Enrolment No._____

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: i. Achlorhydria ii. Normality iii. Saline cathartics iv. Isotopes v. Laxatives	**05**
Q.4	**(a)**	Classify the inorgtanic compounds used as topical agents with examples. Describe the varoius 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: i. Respiratory stimulant ii. Expectorant	**05**
	(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: i. Emetics ii. Astringents iii. Acidifiers iv. Pharmaceutical buffers v. Adsorbents	**05**
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**

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