

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
D. Pharm. – SEMESTER – I • EXAMINATION – WINTER • 2014

Subject Code: 410002

Date: 24-12-2014

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.**

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|------------|--|
| Q.1 | <p>(a) Define the following terms. 06</p> <ol style="list-style-type: none">1. Pharmacopoeia2. Buffer capacity3. Normality4. Water for injection5. Indicator6. Official compound <p>(b) Enlist major intra and extra cellular electrolytes. Discuss the important biological function of sodium ion and bicarbonate ion in the body. 05</p> <p>(c) Write a note on respiratory stimulants. 05</p> |
| Q.2 | <p>(a) Define limit test. Write the principle, reaction and procedure involved in the limit test of iron as per IP. 06</p> <p>(b) How iodine is obtained and purified from natural source? Discuss various official preparations of iodine. 05</p> <p>(c) Write in brief about sources of impurities in pharmaceuticals. 05</p> |
| Q.3 | <p>(a) Give the chemical name and uses of following. 06</p> <ol style="list-style-type: none">1. Precipitated chalk2. Epsom salt3. Rochelle salt4. Alum5. Chlorinated lime6. Lugol's solution <p>(b) What are topical agents? Classify topical agents, giving examples. 05</p> <p>(c) Explain the limit test of arsenic with labelled diagram. 05</p> |
| Q.4 | <p>(a) Distinguish between 06</p> <ol style="list-style-type: none">1. Iodometry and Iodimetry titration2. Oxidizing agent and reducing agent3. Poison and antidote <p>(b) Classify dental products with suitable examples. Discuss the role of fluoride in preventing tooth carries. 05</p> <p>(c) Write about the various mechanism of action of inorganic antimicrobial agents with examples. 05</p> |
| Q.5 | <p>(a) Discuss assay principle and uses of following. 06</p> <ol style="list-style-type: none">1. Hydrogen peroxide2. Boric acid3. Silver nitrate <p>(b) Compare properties of alpha, beta and gamma rays. Write about 05</p> |

	industrial applications of radioactivity.	
	(c) Write a note on dentifrices.	05
Q. 6	(a) Define antacid. Classify it with suitable examples. Write about ideal characteristics of antacids.	06
	(b) Write a note on Lewis theory of acid base.	05
	(c) Enlist methods for measurement of radioactivity. Write about Geiger muller counter.	05
Q.7	(a) Define following terms with examples.	06
	1. Emetic	
	2. Astringent	
	3. Inhalant	
	4. Expectorant	
	(b) Write a note on physiological acid base balance.	05
	(c) Define antioxidant. Give various important criteria for selection of antioxidant. Enlist various antioxidants with chemical formula.	05
