

Seat No.: _____
No. _____

Enrolment

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – III • EXAMINATION – WINTER • 2014

Subject Code: 230004

Date: 24-12-2014

Subject Name: Pharmaceutical Analysis - 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 | (a) What are analytical errors? Write the steps to minimize the error. | 06 |
| | (b) Explain with example: LOQ & LOD. | 05 |
| | (c) Clearly differentiate accuracy & precision. | 05 |
| Q.2 | (a) Derive the ionic product of water. | 06 |
| | (b) Write a detail note on Kjeldhal method to estimate nitrogen. | 05 |
| | (c) Define pH. Clarify hydrogen ion activity coefficient. | 05 |
| Q.3 | (a) Define buffers. Write mechanism of buffer action. | 06 |
| | (b) Derive Handerson-Hasselbach equation for buffers. | 05 |
| | (c) Write application of buffers in pharmacy. | 05 |
| Q.4 | (a) Discuss nitroso reaction. | 06 |
| | (b) Clearly differentiate with suitable examples: iodometry & iodimetry. | 05 |
| | (c) Derive equivalent weights of KMnO_4 in different medium. | 05 |
| Q.5 | (a) Discuss the assay principle with reaction of magnesium salts by complexometry. | 06 |
| | (b) Write a detail note on pM indicators. | 05 |
| | (c) Explain masking and demasking in complexometry. | 05 |
| Q.6 | (a) What is hydrolysis? Derive equation for the determination of pH of a solution of weak base & strong acid. | 06 |
| | (b) What is argentimetry? Describe Fajan's method | 05 |
| | (c) Discuss the principle with reaction involved in Mohr's method. | 05 |
| Q.7 | (a) Clearly differentiate specificity and selectivity of the analytical data. | 06 |
| | (b) Write a note on gravimetry. | 05 |
| | (c) Discuss solvents useful in non aqueous titration. | 05 |
