

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – I • EXAMINATION – WINTER 2013

Subject Code: 2210003**Date: 03-01-2014****Subject Name: Pharmaceutical Analysis -I****Time: 02.30 pm - 05.30 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 is validation? Discuss the different validation parameters of analytical methods. | 06 |
| | (b) Discuss the importance of quality control and quality assurance in formulation analysis. | 05 |
| | (c) Explain types, calibration and cleaning of different glasswares. | 05 |
| Q.2 | (a) Explain theories of acid-base indicators. | 06 |
| | (b) Discuss hydrolysis of salts and ionic products of water. | 05 |
| | (c) Describe Law of mass action in detail. | 05 |
| Q.3 | (a) Describe diazotization nitrite titration. | 06 |
| | (b) Explain in detail about Iodometry and Iodimetry titration. | 05 |
| | (c) Justify the following comments. | 05 |
| | 1. Starch indicator should be added near the end point in iodine titration. | |
| | 2. Potassium permanganate is not a primary standard compound. | |
| | 3. Nitrobenzene is added in the estimation of chloride by Volhard's method. | |
| Q.4 | (a) Write a note on Fajan's method of argentometric titration. | 06 |
| | (b) Discuss levelling and differentiating effect of the solvent in non-aqueous titration. | 05 |
| | (c) What is non-aqueous titration? Explain types of non-aqueous solvents. | 05 |
| Q.5 | (a) Discuss masking and demasking agent. | 06 |
| | (b) Explain complexometric titration and give classification of ligands. | 05 |
| | (c) Write a note on Kjeldahl method. | 05 |
| Q.6 | (a) What is gravimetric analysis? Discuss steps involved in gravimetric analysis. | 06 |
| | (b) Explain co-precipitation and post-precipitation. | 05 |
| | (c) Write a note on Karl-fisher titration. | 05 |
| Q.7 | (a) Calculate pH of 0.1M acetic acid solution when pka is 4.76. | 06 |
| | (b) The K _{sp} of AgCl is 1.0×10^{-10} . Calculate molar solubility of AgCl. | 05 |
| | (c) 0.2 M solution of acetic acid is ionized. Calculate the dissociation constant K _a . | 05 |
