

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BPHARM – SEMESTER I • EXAMINATION – WINTER • 2015

Subject code: 2210003

Date: 02-01-2016

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) | Define validation. Enlist analytical validation parameter and explain it in detail. | 06 |
| | (b) | Discuss the importance of quality control and quality assurance in formulation analysis. | 05 |
| | (c) | Explain following terminology
I. Calibration II. Sampling III. Molarity IV. Normality V. Error | 05 |
| Q.2 | (a) | What is buffer solution? Derive Henderson Hasselbach equation for finding pH of buffer solution? | 06 |
| | (b) | Define Hydrolysis and derive equation for finding pH of aqueous solution of acetic acid with ammonium hydroxide. | 05 |
| | (c) | Enlist end point detection method in acid base titration and explain resonance theory. | 05 |
| Q.3 | (a) | Explain volhard's method. | 06 |
| | (b) | Give comment
1. Mohr's titration is carried out in acidic media.
2. Water is differentiating solvent for HCL and CH ₃ COOH.
3. Starch indicator should be freshly prepared.
4. Acetic acid is added in preparation of perchloric acid.
5. Electrolyte solution is used for wash precipitate. | 05 |
| | (c) | Write note on kjeldahl method. | 05 |
| Q.4 | (a) | Define oxidizing agent and reducing agent and explain redox indicator in detail. | 06 |
| | (b) | Enlist redox titration and explain iodine titration in detail. | 05 |
| | (c) | Describe diazotization nitrite titration. | 05 |
| Q.5 | (a) | Explain ligand and sequestering agent. Write note on replacement titration. | 06 |
| | (b) | Write note on p ^M indicator. | 05 |
| | (c) | Differentiate the following with suitable example :
Masking agent and Demasking agent | 05 |
| Q. 6 | (a) | Give merit, demerit and application of non-aqueous titration. | 06 |
| | (b) | Write brief note on leveling and differentiating effect of solvent. | 05 |
| | (c) | Discuss about co-precipitation and post precipitation. | 05 |
| Q.7 | (a) | Explain theory of von –weimarn's ratio for relative supersaturation. | 06 |
| | (b) | Write note on karl fischer titration. | 05 |
| | (c) | Write pharmacopoeial application of gravimetric analysis. | 05 |
