

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Pharm. SEMESTER– I • EXAMINATION – WINTER -2019**

**Subject Code: BP102TP****Date:30/12/2019****Subject Name: PHARMACEUTICAL ANALYSIS I****Time: 10:30AM TO 0:30PM****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) Enlist various electrodes used in potentiometry. Explain NHE in detail. **06**  
(b) Define: Polarography, Limiting current, Diffusion current, Migration current, Residual current. **05**  
(c) Enlist redox titration in which starch act as an indicator and explain any one in detail. **05**
- Q.2** (a) Define oxidizing agent and reducing agent with example and explain Redox indicator in detail. **06**  
(b) Write a note on potentiometric titrations. **05**  
(c) Describe factor affecting conductance. **05**
- Q.3** (a) Write a note on factors affecting purity of precipitation. **06**  
(b) Briefly explain the applications of conductometry. **05**  
(c) Explain error minimization techniques. **05**
- Q.4** (a) Explain different types of complexometric titration. **06**  
(b) Explain- how to estimate barium sulphate by gravimetry. **05**  
(c) Write a note on solvent, titrant and indicator used for weak acid & weak base in non-aqueous titration. **05**
- Q.5** (a) Enlist the end point detection methods in precipitation titration. Explain mohr's method in detail. **06**  
(b) Explain the estimation of sodium benzoate by non-aqueous titration. **05**  
(c) Explain in brief various acid base theories. **05**
- Q.6** (a) Explain end point detection method in acid base titration. **06**  
(b) Define: Normality, Molality, Mole fraction, Titrant, Stoichiometric end point. **05**  
(c) Explain primary and secondary standards with example. Write a note on Preparation and standardization of molar and normal solutions of hydrochloric acid and sulphuric acid. **05**
- Q.7** (a) Classify Errors and explain accuracy and precision in detail. **06**  
(b) Write a detailed note on classification of analytical method. **05**  
(c) Write a note on metallochromic indicator. **05**

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