

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM – SEMESTER – 1- EXAMINATION –WINTER - 2018**

**Subject Code: BP102TP**

**Date: 03/01/2019**

**Subject Name: Pharmaceutical Analysis I**

**Time:10:30 AM TO 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.**

- Q.1** (a) Define error. Classify the error and methods of their minimization. **06**  
(b) Discuss various sources of impurities. **05**  
(c) Write a note on dropping mercury electrode (DME). **05**
- Q.2** (a) Explain in detail theories acid- base indicators. **06**  
(b) Define buffer solution. Explain in detail Henderson-Hasselbach equation for finding pH of buffer solution. **05**  
(c) What is non aqueous titration? Give merits, demerits and application of non aqueous titration. **05**
- Q.3** (a) What is gravimetric analysis? Discuss steps involved in gravimetric analysis. **06**  
(b) Discuss in detail about Diazotization titration. **05**  
(c) What is hydrolysis? Derive equation for finding pH of aqueous solution of salt of strong acid and weak base. **05**
- Q.4** (a) Write a short note on (I) Masking and Demasking reagents (II) pM indicators. **06**  
(b) Define Ligand and Chelate. Give an account of different types of EDTA titrations. **05**  
(c) Write a note on Volhard's method of Precipitation titration. **05**
- Q.5** (a) Discuss the principle involved in the assay of magnesium sulphate IP'96. **06**  
(b) Enlist types of redox titration and explain iodine titration in detail. **05**  
(c) Explain in detail Mohr's method. **05**
- Q.6** (a) Write a brief note on types of non aqueous solvents and leveling and differentiating effect of solvent. **06**  
(b) Define terms: (i) Co Precipitation (ii) Primary standard compound (iii) Standardization (iv) Pharmacopeia (v) Normality. **05**  
(c) Describe factors affecting on conductance. **05**
- Q.7** (a) Comments: (1) Water is differentiating solvent for HCl and CH<sub>3</sub>COOH. **06**  
(2) Starch indicator should be added near the end point in iodine titration.  
(3) Electrolyte solution is used for wash precipitate.  
(b) Define Reference electrode. Enlist types of it and write a note on Saturated Calomel electrode (SCE). **05**  
(c) Write a brief note on different techniques of analysis. **05**

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