

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.**

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

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