

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Ph. - SEMESTER- I -- EXAMINATION – SUMMER -2022**

**Subject Code: BP102TP****Date: 05/09/2022****Subject Name: Pharmaceutical Analysis-I****Time:10:30 A.M To 1:30 P.M****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 following terms- 1) Accuracy 2) Significant figures 3) Normality 4) Stoichiometric point 5) Precision 6) Primary standards | <b>06</b> |
|             | (b) Discuss the principle and reaction involved in limit test of Iron as per IP.  | <b>05</b> |
|             | (c) Define Error. Describe the methods of minimization of errors.   | <b>05</b> |
| <b>Q.2</b>  | (a) What is hydrolysis? Derive equation for finding pH of aqueous solution of salt of weak acid and strong base.                      | <b>06</b> |
|             | (b) Explain Buffer in detail. Write equation to calculate pH of buffer solution.  | <b>05</b> |
|             | (c) Discuss in brief various solvents used in non aqueous titration.  | <b>05</b> |
| <b>Q.3</b>  | (a) Write a short note on volhard's method of precipitation titration?  | <b>06</b> |
|             | (b) Give comment on following   | <b>05</b> |
|             | 1. Starch indicator should be added toward the end point in iodometric titration.   |           |
|             | 2. Mohr's titration carried out in acidic media.  |           |
|             | (c) Explain ligand. Write detail note on masking and demasking phenomenon.  | <b>05</b> |
| <b>Q.4</b>  | (a) What is gravimetric analysis? Explain merits, demerits and application of gravimetric analysis.                                   | <b>06</b> |
|             | (b) Enlist redox titration and explain diazotization nitrite titration in detail.   | <b>05</b> |
|             | (c) pM Indicator.   | <b>05</b> |
| <b>Q.5</b>  | (a) What is reference electrode? Mention the type of reference electrodes. Describe in detail of SCE.                                 | <b>06</b> |
|             | (b) Discuss in detail different component of polarogram.  | <b>05</b> |
|             | (c) Differentiate between 1. Differentiating and leveling effect<br>2. Iodometry and Iodimetry  | <b>05</b> |
| <b>Q. 6</b> | (a) Write a detail note on end point determination of potentiometric titration.   | <b>06</b> |
|             | (b) Discuss about co-precipitation and post precipitation.  | <b>05</b> |
|             | (c) Explain DME in detail.  | <b>05</b> |
| <b>Q.7</b>  | (a) What is complexometric titration? Give different types of complexometric titration.   | <b>06</b> |
|             | (b) Write a note on Fajan method.   | <b>05</b> |
|             | (c) Write preparation and standardization of ceric ammonium sulphate.   | <b>05</b> |

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