

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. Pharm. - SEMESTER-3 • EXAMINATION – SUMMER -2018**

**Subject Code: 230004**

**Date: 07/05/2018**

**Subject Name: Pharmaceutical Analysis - I**

**Time: 02:30 PM TO 05:30 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) | Enlist the different type of complexometric titration.<br>Explain replacement type of complexometric titration in detail with suitable examples. | <b>06</b> |
|             | (b) | What is analytical method validation? Enlist validation parameter. Discuss any two parameters in detail.   | <b>05</b> |
|             | (c) | Explain masking and demasking in complexometry.  | <b>05</b> |
| <b>Q.2</b>  | (a) | Enumerate areas of application of acid-base buffers.<br>Derive Henderson-Hasselbach equation for finding pH of buffer solution                   | <b>06</b> |
|             | (b) | Discuss Merits and Demerits of non aqueous titration over aqueous titration  | <b>05</b> |
|             | (c) | Explain indicators in complexometric titration?  | <b>05</b> |
| <b>Q.3</b>  | (a) | Describe in detail about gravimetric method of Analysis  | <b>06</b> |
|             | (b) | Define redox titration. Write a note on potassium permanganate titration   | <b>05</b> |
|             | (c) | Write note on theory of acid base indicators   | <b>05</b> |
| <b>Q.4</b>  | (a) | What is error?<br>Classify the error and how will you minimize the error?  | <b>06</b> |
|             | (b) | Briefly explain the redox indicators.  | <b>05</b> |
|             | (c) | Give preparation and standardization of $\text{KMnO}_4$  | <b>05</b> |
| <b>Q.5</b>  | (a) | Enlist the end point detection methods in precipitation titration.<br>Explain fajan's method in detail.  | <b>06</b> |
|             | (b) | Explain in detail about Mohr's method.   | <b>05</b> |
|             | (c) | Differentiate Iodometric and Iodimetric titrations.  | <b>05</b> |
| <b>Q. 6</b> | (a) | Give the importance of quality control and quality assurance in formulation analysis.  | <b>06</b> |
|             | (b) | Give a detailed account of calibration and cleaning of glass wares   | <b>05</b> |
|             | (c) | Write a note on common ion effect.   | <b>05</b> |
| <b>Q.7</b>  | (a) | Write note on cerometry  | <b>06</b> |
|             | (b) | Explain about sampling techniques.   | <b>05</b> |
|             | (c) | Write a brief note on neutralization curve.  | <b>05</b> |

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