

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

**Subject Code:240004****Date: 18/05/2018****Subject Name: Pharmaceutical Analysis-II****Time: 10.30 AM -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) | Write down classification of instrumental methods of analysis with its advantages and limitations.                                | <b>06</b> |
|             | (b) | Discuss signal to noise ratio. Enlist different validation parameters   | <b>05</b> |
|             | (c) | Explain the following.<br>1. Kohlrausch's law    2. Retention time    3. Racemic mixture<br>4. Diffusion current    5. Validation | <b>05</b> |
| <b>Q.2</b>  | (a) | What is chromatography? Discuss theories of chromatography.   | <b>06</b> |
|             | (b) | Explain different development techniques in paper chromatography.   | <b>05</b> |
|             | (c) | Discuss factors affecting conductance.  | <b>05</b> |
| <b>Q.3</b>  | (a) | Discuss ideal characteristic of reference electrode. Describe any one in detail.  | <b>06</b> |
|             | (b) | Explain different types of conductometric titrations.   | <b>05</b> |
|             | (c) | Write a short note on TLC.  | <b>05</b> |
| <b>Q.4</b>  | (a) | Enlist different indicator electrodes. Describe glass electrode in detail.  | <b>06</b> |
|             | (b) | Discuss stripping voltametry with any two stripping techniques.   | <b>05</b> |
|             | (c) | Write down applications of potentiometry.   | <b>05</b> |
| <b>Q.5</b>  | (a) | Explain current -voltage curve in detail.   | <b>06</b> |
|             | (b) | Write a brief note on amperometric titrations.  | <b>05</b> |
|             | (c) | Describe dropping mercury electrode at length.  | <b>05</b> |
| <b>Q. 6</b> | (a) | Discuss factors affecting TG curve.   | <b>06</b> |
|             | (b) | Explain the following.<br>1. Optical activity    2. Dead stop end point method  | <b>05</b> |
|             | (c) | Write in detail about principle and applications of DSC   | <b>05</b> |
| <b>Q.7</b>  | (a) | What is zone broadening? Explain the sources of zone broadening.  | <b>06</b> |
|             | (b) | How will you improve column efficiency? Explain in detail.  | <b>05</b> |
|             | (c) | What is specific conductance. Write a short note on conductivity cell.  | <b>05</b> |

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