

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 4 EXAMINATION – SUMMER -2019**Subject Code: 240004****Date: 13-05-2019****Subject Name: Pharmaceutical Analysis - II****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) What are different retention mechanisms in chromatography? Elaborate any two in detail. **06**
(b) Discuss the various development techniques of paper chromatography **05**
(c) Discuss Van Deemter equation in detail. **05**
- Q.2** (a) Explain validation and describe the validation of instrumental analytical methods. **06**
(b) What is S/N ratio? explain sources of noise in instrumental analysis **05**
(c) Discuss advantages and limitations of instrumental analysis. **05**
- Q.3** (a) Write working principle of glass electrode. Write the disadvantage of use of glass electrode. **06**
(b) Discuss the various types of potentiometric titrations. And discuss any one in detail. **05**
(c) Discuss membrane electrodes in detail. **05**
- Q.4** (a) Define conductance. Describe the applications of conductometry. **06**
(b) Describe factors affecting conductance. **05**
(c) Explain conductometric titration curve for weak acid against strong base with suitable example. **05**
- Q.5** (a) Describe the working of DME. And discuss the advantages and disadvantages of DME. **06**
(b) Define: **05**
1. R_f 2. Diffusion current. 3. Residual current 4. Resolution 5. HETP
(c) Distinguish the following pairs: **05**
1. Normal phase and reverse phase chromatography
2. Equivalent conductance and specific conductance.
- Q.6** (a) Define thermogravimetry and classify them, discuss factors affecting thermogravimetric curve. **06**
(b) What is difference between DSC and DTA? Write applications of both. **05**
(c) Discuss instrumentation of Polarimeter. **05**
- Q.7** (a) Write note on following : **06**
(i) Amperometric titration
(ii) Half wave potential
(b) Write a note on differential pulse polarography. **05**
(c) Write comment on following **05**
(i) Stripping voltametry has high sensitivity.
(ii) Supporting electrolytes are used in polarography.
(iii) Zinc silicate is used in TLC
