

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.

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|-------------|---|-----------|
| 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:
1. R_f . 2. Diffusion current. 3. Residual current 4. Resolution 5. HETP | 05 |
| | (c) Distinguish the following pairs:
1. Normal phase and reverse phase chromatography
2. Equivalent conductance and specific conductance. | 05 |
| 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 :
(i) Amperometric titration
(ii) Half wave potential | 06 |
| | (b) Write a note on differential pulse polarography. | 05 |
| | (c) Write comment on following
(i) Stripping voltametry has high sensitivity.
(ii) Supporting electrolytes are used in polarography.
(iii)Zinc silicate is used in TLC | 05 |