

GUJARAT TECHNOLOGICAL UNIVERSITY**B. Pharm. – SEMESTER – IV • EXAMINATION – WINTER • 2016****Subject Code: 240004****Date: 22-10-2016****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.**

- Q.1** (a) Define chromatography. And give suitable classification of various chromatographic techniques. **06**
- (b) Write short note on column chromatography. **05**
- (c) Discuss the various development techniques of paper chromatography. **05**
- Q.2** (a) Define conductance. Describe the applications of conductometry. **06**
- (b) Enlist the types of conductometric titrations. And explain conductometric titration curve for weak acid against strong base with suitable example. **05**
- (c) Describe factors affecting conductance. **05**
- Q.3** (a) Describe the working of DME. And discuss the advantages and disadvantages of DME. **06**
- (b) Define: **05**
1. Polarography. 2. Limiting current. 3. Diffusion current. 4. Migration current. 5. Residual current.
- (c) Discuss the applications of polarography. **05**
- Q.4** (a) Discuss the various types of potentiometric titrations. And discuss any one in detail. **06**
- (b) Write working principle of glass electrode. Write the disadvantage of use of glass electrode. **05**
- (c) Enlist characteristics of an ideal reference electrode used in potentiometry. And discuss various reference electrodes. **05**
- Q.5** (a) Define thermogravimetry and classify them, discuss factors affecting thermogravimetric curve. **06**
- (b) Write short note on TGA **05**
- (c) What is difference between DSC and DTA? Write applications of both. **05**

- Q. 6** (a) Define polarimetry.Explain working principle of polarimeter. **06**
(b) Distinguish the following pairs: **05**
1. Stationary phase and mobile phase.
2. Diffusion current and residual current.
(c) Write short note on amperometric titrations **05**
- Q.7** (a) Describe the principle of paper chromatography and discuss its **06**
applications.
(b) What is S/N ratio? explain sources of noise in instrumental analysis **05**
(c) Describe the validation of instrumental analytical methods. **05**
