

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 7- EXAMINATION – WINTER - 2018**Subject Code: 270004****Date: 22/11/2018****Subject Name: Pharmaceutical Analysis III****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) Define: a) Line Spectra b) Spectroscopy c) Emission Spectroscopy **06**
(b) Enlist IR detectors. And Explain any one in detail. **05**
(c) Write a note on interference in Atomic Absorption Spectroscopy. **05**
- Q.2** (a) Explain principle and working for Time of Flight mass Analyser. **06**
(b) Explain the different types of vibrations in IR. **05**
(c) Write a note on Hollow Cathode Lamp. **05**
- Q.3** (a) Explain the principle of NMR. **06**
(b) Define and derive Beer Lambert's Law. **05**
(c) Explain the principle of Florescence and Phosphoresce with Jablonski diagram. **05**
- Q.4** (a) Explain: a) Bathochromic Shift b) Auxochrome c) Hypsochromic shift **06**
(b) Explain: a) Mc lafferty Rearrangement b) Nitrogen Rule **05**
(c) Write a note on Deviations of Beer Lambert's Law. **05**
- Q.5** (a) Define Quenching. Write a note on Quenching Agents. **06**
(b) Enlist Ionization techniques for Mass Spectroscopy and explain any one. **05**
(c) Write a note on chemical shift for NMR. **05**
- Q. 6** (a) Describe the instrumentation required for fluorescence analysis. What are primary filter and secondary filters? **06**
(b) Write a note on Radiation sources for UV spectroscopy. **05**
(c) Explain: a) Fingerprint region b) Base ion peak **05**
- Q.7** (a) Comment: Benzene is colourless while Nitrobenzene is pale yellow in colour. **06**
(b) Which elements are contributed to M+2 ion peak in mass spectra? Why? **05**
(c) Write a note on FT-TR. **05**
