

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.**

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|-------------|--|-----------|
| 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 |
