

QP CODE: 211331

Reg. No:.....

**Second Semester M. Pharm Degree Supplementary Examinations
February 2026**

**M.Pharm (Pharmaceutical Chemistry)
Paper I - Advanced Spectral Analysis (MPC 201T)
(Common for 2019 and 2024 Scheme)**

Time: 3 Hours

Total Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays

(3x10=30)

1. What is thermal method of analysis. Discuss principle, instrumentation and applications of Differential Thermal Analysis (DTA).
2. Describe the general fragmentation rules in mass spectroscopy. Add a note on Mc Lafferty rearrangement.
3. Discuss interpretation of the NMR spectra of organic compounds. Add a note on INADEQUATE technique.

Short Notes

(9x5=45)

4. Write the instrumentation and applications of ATR-IR.
5. Write the principle, instrumentation and applications of CE-MS.
6. What is TGA. Discuss the principle involved in the TGA.
7. Explain the components of GC-MS and write in brief about the detectors used.
8. Write a note on ion –exclusion chromatography and flash chromatography.
9. Discuss about isotopic peaks and its significance in mass spectra.
10. Describe the principle and applications of HPTLC.
11. Discuss about Radio immune Assay of Insulin.
12. Explain various hyphenation techniques of liquid chromatography.

CORRECTION / NO-CORRECTION FILE
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QPCODE: 211331

Dated: 13-02-2026

Question No. 11

Corrected as "Discuss about Radioimmunoassay of Insulin."

Corrections/Modifications/Replacement of Questions if any shall be made available to all students. Take the print out of the Correction File in such cases and distribute to all students.

(Sd/-)

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