

QP CODE: 211331

Reg. No:.....

**Second Semester M. Pharm Degree Regular/Supplementary Examinations
November 2025**

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. Discuss Woodward-Fieser rule for 1,3- butadienes and cyclic dienes
2. Explain the instrumentation involved in 1D and 2D NMR and discuss the NOESY and COSY techniques
3. Explain the principle, instrumentation and applications of High Performance Thin Layer chromatography

Short Notes

(9x5=45)

4. Enumerate various aspects of molecular fragmentation in mass spectroscopy
5. Give an account on Ion- Exclusion Chromatography
6. Explain briefly on bioassays
7. Brief out on instrumentation and applications of Raman Spectroscopy
8. Write a note on the radio immuno assay techniques of digitalis
9. Write the principle and applications of DSC
10. Write a note on ATR-IR
11. Explain the steps involved in the structural interpretation of an organic compound with an example
12. Brief on ELISA
