

**QP CODE: 211331**

**Reg. No:.....**

**Second Semester M. Pharm Degree Regular/Supplementary Examinations  
February 2021**

**M.Pharm (Pharmaceutical Chemistry)**

**Paper I - Advanced Spectral Analysis (MPC 201T)**

**Time: 3 Hours**

**Total Marks: 75**

- Answer all Questions.
- Draw Diagrams wherever necessary.

**Essays**

**(3x10=30)**

1. Explain NOESY and COSY
2. Describe the principle and working of ATR-IR. Add a note on IR interpretation of functional groups in organic compounds.
3. Elaborate the principle, instrumentation and applications of DSC

**Short Notes**

**(9x5=45)**

4. The mass fragmentation of alkanes and amines
5. Principle in flash chromatography
6. Application of GC-AAS
7. Instrumentation and applications of Raman spectroscopy
8. Explain  $^1\text{H}$  NMR interpretation with suitable examples
9. Radioimmunoassay of digitalis
10. Principle involved in HPTLC
11. Discuss ring rule and isotopic peak in mass fragmentation
12. Explain Woodward-Fieser rule for 1,3-butadienes and interpretation of enone compounds

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