

**First Semester M.Pharm Degree Supplementary Examinations
August 2024**

Paper I: Modern Pharmaceutical Analytical Techniques (MPT 101T)

(2019 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. Describe the principle, instrumentation and applications of mass spectroscopy.
2. Explain in detail different x-ray methods.
3. Discuss the principle, instrumentation and factors affecting separation in gel electrophoresis.

Short Notes

(9x5=45)

4. Explain the NMR signals in few compounds. Write the principle of FT-NMR.
5. Write briefly on difference spectroscopy. Mention the applications of UV spectroscopy.
6. Discuss the generation of molecular ions in mass spectroscopy. Write short notes on MALDI.
7. Principle and working of ion selective electrodes.
8. Explain the theory about Bragg's law.
9. RIA (Radio Immuno Assay) and its importance.
10. Explain the theory of fluorescence and discuss the factors affecting quenching of fluorescence.
11. Explain • Spin – spin coupling • Coupling constant
12. Principle, instrumentation of atomic absorption spectroscopy.
