

QP CODE: 111331

Reg. No:.....

**First Semester M.Pharm Degree Supplementary Examinations
January 2021**

M.Pharm (Pharmaceutical Chemistry)

Paper I: Modern Pharmaceutical Analytical Technique (MPA101T)

(2017 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 pharmaceutical applications of differential scanning calorimeter
2. Define fluorescence and quenching. Describe the various factors affecting fluorescence intensity
3. Discuss the theory, various modes of vibrations, sample preparation and applications of IR spectroscopy

Short Notes

(9x5=45)

4. Effect of solvents and pH in UV visible spectroscopy
5. Differentiate between flame emission and atomic absorption spectroscopy
6. Spin-spin coupling
7. Applications of mass spectroscopy
8. Describe any two detectors used in gas chromatography
9. Explain principle, working and applications of ion exchange chromatography
10. Describe Bragg's law and its applications
11. Derivative differential thermal analysis
12. Principle and applications of potentiometry.
