

QP CODE: 111328

Reg. No:.....

First Semester M.Pharm Degree Supplementary Examinations March 2020

M.Pharm (Pharmacology)

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. Explain the theory, instrumentation and applications of mass spectrometry
2. Explain theory, sample handling and instrumentation of Fourier-transform IR spectrometer
3. Discuss the instrumentation, principle and applications of gas chromatography

Short Notes

(9x5=45)

4. The principle and applications of paper electrophoresis
5. Explain the principle, merits & demerits and pharmaceutical applications of differential thermal analysis (DTA)
6. What is Bragg's law. Write the applications of X-ray diffraction
7. Discuss ^{13}C NMR spectroscopy and write its applications
8. Discuss mass fragmentation and its rules
9. Explain Beer's and Lambert's law. Add a note on choice of solvents in UV spectroscopy
10. The differences between thin layer chromatography and high performance thin layer chromatography
11. The principle and applications of potentiometry
12. Explain about quantum numbers and their role in NMR.
