

QP CODE: 111331

Reg. No:.....

First Semester M.pharm Degree Examinations April 2018

M.Pharm (Pharmaceutical Chemistry)

Paper I: Modern Pharmaceutical Analytical Technique (MPA101T)

Time: 3 Hours

Total Marks: 75

- Answer all Questions.
- Draw Diagrams wherever necessary.

Essays

(3x10=30)

1. Explain the principle of mass spectrometry (MS). Describe the rules for fragmentation of molecules in MS with suitable example.
2. Explain the theory of nuclear magnetic resonance (NMR) spectroscopy. Explain spin-spin splitting. Describe the splitting pattern of ethyl alcohol and isopropyl bromide obtained in portion NMR
3. Explain the principle, excitations, monochromators and any two detectors used in ultraviolet visible spectroscopy. Add a note on effect of solvents on UV spectra

Short Notes

(9x5=45)

4. Describe about MALDI. Explain principle and applications of MALDI
5. Explain principle, instrumentation and working conditions of gel electrophoresis
6. Compare the construction, working principle and applications of any two detectors used in gas chromatography
7. What is vibrational frequency. Calculate the approximate frequency of C-H stretching vibration by using Hooks law.
8. Explain principle and instrumentation of atomic absorption spectroscopy
9. Derivative differential thermal analysis
10. Briefly explain the principle and working condition of potentiometry
11. What are isocratic and gradient elution techniques. Which one is better and why.
12. Explain principle and working of any two detectors used in HPLC with neat diagrams.
