

QP CODE: 111350

Reg. No:.....

First Semester M.pharm Degree Regular Examinations March 2020

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 working principle of UV – visible spectroscopy. Write briefly on monochromators and any two detectors used in UV - visible spectroscopy. Add a note on effect of solvents in UV spectra.
2. Explain the working principle of mass spectrometer. Describe the rules for fragmentation of molecules in mass spectroscopy with suitable examples.
3. Define the terms chromatography and chromatogram. Explain in detail the principle, instrumentation, detectors used and applications of gas chromatography.

Short Notes

(9x5=45)

4. What is spin-spin coupling. Explain any two methods of coupling.
5. Write an account on quadrupole and time of flight analyzers used in MS.
6. Explain the construction and working principle of glass electrode.
7. Write briefly on • chemical shift • Bragg's law
8. Explain the principle and mechanism of ion exchange chromatography.
9. Define the Beer – Lambert's law and the factors affecting it.
10. Explain the principle and mechanism of affinity chromatography.
11. Explain the principle and applications of differential thermal analyzer.
12. Describe the splitting pattern for ethyl alcohol in NMR.
