QP CODE: 111330	Reg. No:
GI OODE. IIIOOO	1109:110:::::::::::::::::::::::::::::::

## First Semester M.pharm Degree Examinations April 2018 M.Pharm (Pharmacognosy)

Paper I: Modern Pharmaceutical Analytical Techniques (MPA101T)

Time: 3 Hours Total Marks: 75

- Answer all Questions.
- Draw Diagrams wherever necessary.

Essays (3x10=30)

- 1. Explain the principle, instrumentation, interferences and applications of atomic absorption spectroscopy.
- 2. Describe the principle, instrumentation, data interpretation and applications of high performance thin layer chromatography.
- 3. Describe the instrumentation working conditions, factors affecting separation and applications of gel electrophoresis

Short Notes (9x5=45)

- 4. Principle of FT-NMR.
- 5. Quantum numbers and their role in NMR.
- 6. Different types of ionization in mass spectroscopy.
- 7. Applications of mass spectroscopy.
- 8. Working of potentiometry.
- 9. Modulated DSC.
- 10. Principle of differential thermal analysis.
- 11. Applications of gas chromatography.
- 12. Applications of X-ray diffraction.

\*\*\*\*\*\*\*\*\*\*\*