

CODE NO: 13147/PCI

FACULTY OF PHARMACY**M. Pharmacy (Common Paper for all Specialization) I – Semester****(Main & Backlog) Examination, January 2019****Subject : Modern Pharmaceutical Analytical Techniques****Time: 3 Hrs****Max. Marks: 75****Note:** Answer any Five Questions. All Questions Carry Equal Marks.

- 1) a) With a neat labeled diagram explain UV/Visible instrumentation. 8
b) Briefly explain the electronic transitions with examples 8
- 2) a) Explain the factors affecting vibrational frequencies in IR. 8
b) Write the sampling methods in IR spectroscopy. 7
- 3) a) Briefly explain the srce of AAS. 8
b) List and explain the interferences. 5
c) List some metals that can be analysed by AAS. 2
- 4) a) Explain NMR instrumentation. 8
b) Briefly explain spin-spin cpling with a suitable example. 7
- 5) a) What is the principle of MS. With a neat labelled diagram briefly explain the components of MS instrumentation. 8
b) Explain Quadrupole and time of flight analysers in detail. 7
6. (a) What are the column efficiency parameters? 7
b) List and explain any 2 GC detectors. 8
7. Explain the principle and application of capillary electrophoresis. Give a labelled diagram to indicate the components of the instrument.
- 8 (a) Discuss the principle, instrumentation working and application of
 - a. Paper electrophoresis
 - b. Gel electrophoresis7+8
