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Roll No

MPY-101

M.Pharmacy I Semester

Examination, November 2019

Modern Analytical Technique

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain Beer Lambert's law.
b) Discuss factors affecting vibrational frequencies and different types of coupled vibrations in IR spectrophotometry.
2. a) Explain splitting of signals and spin-spin coupling.
b) How C^{13} NMR differs from 1H -NMR.
3. a) Explain McLafferty Rules with examples.
b) Write in detail different ionization techniques in mass spectrometry.
4. a) Compare ORD and CD techniques.
b) Give comparative account on TGA and DTA methods.
5. a) Draw a labelled diagram of Gas chromatography and explain HETP in connection with continuous flow separation process.
b) Explain detectors used in HPLC.

6. a) Give principle and applications of Atomic absorption spectroscopy.
b) Explain development of finger print in HPLC analysis.
7. a) What is RIA techniques? Explain various RIA methods and their applications.
b) Write a note on Autoradiography.
8. Write short notes on (any two)
 - a) Principle and applications of SEM
 - b) X-ray crystallography
 - c) Flow cytometry
