

Roll No.

Total No. of Pages : 01

Total No. of Questions : 06

M.Pharmacy (Pharmaceutical Analysis) (2017 & Onwards) (Sem.-1)

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Subject Code : MPA-101T

Paper ID : [74693]

Time : 3 Hrs.

Max. Marks: 75

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of SIX questions.
2. Each question carry FIFTEEN marks.

1. a. Discuss deviations in Beer's law. (4)
b. Compare Dispersive and Fourier transform IR. (5)
c. Define Stoke's law, Quantum yield and Quencher. (6)
2. a. How is the ^{13}C NMR superior than ^1H NMR? (5)
b. Describe various factors affecting chemical shift in ^1H NMR. (5)
c. Comment on simplification of ^1H NMR spectrum. (5)
3. a. Compare ESI and CI mode of ionization in mass spectrometry. (5)
b. Describe the fragmentation pattern of toluene in mass spectrum. (5)
c. Discuss McLafferty rearrangement and its applications in mass spectrometry. (5)
4. a. Discuss factors affecting the resolution in TLC. (5)
b. What is affinity chromatography? Describe its specific applications. (5)
c. What is guard column? Describe its use in HPLC. (5)
5. a. Describe in detail various factors affecting separation by gel electrophoresis. (7.5)
b. Describe X-ray generator for generating X rays of sufficient intensity for diffraction studies. (7.5)
6. a. Describe principle and working of potentiometry. (7.5)
b. Describe pharmaceutical applications, advantages and disadvantages of DSC. (7.5)