Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 08

M.Pharmacy (Pharmacology) (2017 & Onwards) (Sem.–1)

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Subject Code : MPL-101T

M.Code : 74675

Time : 2 Hrs. Max. Marks : 37.5

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE question(s), each question carries 7.5 marks.

1. a. Discuss deviation in Beer-Lambert's law.
   b. Give block diagram of single beam atomic absorption spectrometer.
2. a. Describe magnetic anisotropy in 1H NMR by suitable example.
   b. Briefly explain shielding-deshielding effect and spin-spin splitting.
3. a. Describe principle and construction of TOF mass analyzer.
   b. Compare ESI, EI and CI mode of ionization in mass spectrometry.
4. a. Give brief account of selection of stationary phase for GLC.
   b. Explain isocratic and gradient elution in HPLC.
5. a. Give application of gel electrophoresis.
   b. Describe the limitations of isocratic focusing.
6. a. Explain the principle of potentiometry.
   b. Discuss derivative differential thermal analysis and its specific applications.
7. a. Comment on sampling handling in IR.
   b. Use the N+1 rule to predict splitting pattern in following compounds :

   a) $CH_3CH_2CH_2Br$ b) $CHBr_2CH_2Br$

8. a. Describe various type of pumps used in HPLC.
   b. Name various X-ray diffraction methods. Briefly describe any one of them.

Note: Any student found attempting answer sheet from any other person(s), using incriminating material or involved in any wrong activity reported by evaluator shall be treated under UMC provisions.

Student found sharing the question paper(s)/answer sheet on digital media or with any other person or any organization/institution shall also be treated under UMC.

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