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Total No. of Pages : 01

Total No. of Questions : 06

M.Pharmacy(Pharmacology) (2017 & Onwards) (Sem.-1)
MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Subject Code : MPL-101T

M.Code : 74675

Time : 3 Hrs.

Max. Marks : 75

INSTRUCTIONS TO CANDIDATES :

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

- Q1. a) Explain the principle and applications of atomic absorption spectroscopy in drug discovery. (7)
- b) Discuss various factors that affect UV spectra of a compound. (8)
- Q2. a) What do you understand by the terms Spin-spin coupling, coupling constant and double resonance? Discuss various factors affecting them. (10)
- b) Elaborate on applications of NMR in the field of drug discovery. (5)
- Q3. a) Explain mass fragmentation with suitable examples. Discuss various rules that govern mass fragmentation. (9)
- b) Discuss the principle of MALDI, APCI, and TOF. (6)
- Q4. a) You have to develop an analytical method on HPLC. What are the various factors you have to keep in mind that can effect the resolution? (8)
- b) Discuss principle and applications of potentiometric analysis. (7)
- Q5. a) Compare Gel and capillary electrophoresis on the basis of their principle, instrumentation and applications. (8)
- b) Give the principle of HPTLC and its applications in the field of pharmacology. (4)
- c) Explain the principle of Moving boundary electrophoresis and XRD. (3)
- Q6. a) Give the principle, instrumentation and application of DSC in pharmaceutical industry. (8)
- b) Compare GC and UPLC on the basis of principle, sensitivity and instrumentation. (7)

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.