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Total No. of Pages : 01

Total No. of Questions : 06

**M.Pharm(Pharmaceutical Chemistry) (2017 & Onwards) (Sem.-2)****ADVANCED SPECTRAL ANALYSIS****Subject Code : MPC-201T****M.Code : 74955****Time : 3 Hrs.****Max. Marks : 75****INSTRUCTIONS TO CANDIDATES :**

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

1. Explain in brief :
  - a. MC Lafferty Rearrangements (3)
  - b. NOESY (3)
  - c. Meta stable ions (3)
  - d. HPLC detectors (3)
  - e. Principle of Raman spectroscopy (3)
2.
  - a. Give the principle, instrumentation and application of DSC. (7.5)
  - b. Write a short note on ELISA. (7.5)
3. Give a brief overview and applications of Super critical fluid chromatography. (15)
4.
  - a. Discuss in details the electron impact and FAB type of ionization techniques in Mass spectrophotometry. (10)
  - b. Explain interfaces of GC-MS. (5)
5.
  - a. Name and define the law useful to determine the frequency of various types of IR bands. Discuss its applications. (8)
  - b. Define woodfischer rule and how do you calculate the absorption maximum wavelength for Dienes with Woodward Fieser Rule? (7)
6.
  - a. Name Liquid chromatography hyphenated techniques and discuss any one in detail. (7.5)
  - b. Discuss different types of ionization methods in mass spectrophotometry in detail. (7.5)

**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.**

