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Total No. of Pages : 01

Total No. of Questions : 06

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

**MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES**

Subject Code : MPA-101T

M.Code : 74693

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. Discuss the principles, instrumentation and applications of IR spectroscopy with suitable examples and/or flow charts. 15
2. a. Discuss chemical shifts and coupling in NMR. 7  
b. Write a note on principles and applications of NMR. 8
3. Describe the principles, instrumentation, procedure and applications of Mass Spectroscopy with suitable examples and/or flow charts. 15
4. Give a detailed account on the principles, instrumentation and applications of UPLC. 15
5. Write short notes on the following :
  - a. Gel Electrophoresis 8
  - b. Principles, working and applications of DSC 7
6. Discuss the following with suitable examples :
  - a. DTA 5
  - b. Applications of potentiometry 5
  - c. Atomic absorption spectroscopy 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.**