

QP Code: 101350

Reg No: .....

First Year M.Pharm Degree Supplementary Examinations-July 2013  
(2010 Admission - Old Scheme)

Modern Analytical and Research Methods

(Common for all branches)

Time: 3 hrs

Maximum Marks: 100

- Answer all questions
- Draw diagrams wherever necessary

Essays: , (2x20=40)

1. Classify chromatographic techniques based on mechanism of separation. Mention the principle behind high performance liquid chromatography (HPLC). Explain its applications in pharmacy. (5+10+5=20)
2. Explain the theory of fluorimetry. What are the factors affecting fluorescence. Add a note on fluorescence polarization. (10+5+5=20)

Short Essays: (6x10=60)

3. What are the different derivatization techniques in gas chromatography (GC). Add a note on its hyphenation with mass spectrometry (MS).
4. Explain the working of a double beam UV-visible spectrophotometer with the help of a neat diagram,
5. Explain the effect of infra red radiation on organic molecules using pictorial representation
6. Explain C13 NMR and its use in the characterization of organic compounds.
7. What is chemical shift. Explain the factors affecting chemical shift.
8. Describe the different ionization techniques used in mass spectrometry (MS). Add a note on qudrapole ion trap.

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