

QP Code: 101350

Reg No:

First Year M.Pharm Degree Examinations August 2016

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. Discuss in detail the fragmentation pattern of different functional groups with reference to empirical rules. Add a note on hyphenation of MS with GC and LC and its application in pharmacy. (15+5=20)
2. Explain the principle and instrumentation of NMR with a neat diagram. Explain the interpretation of proton magnetic spectra with examples. (10+10=20)

Short Essays:

(6x10=60)

3. Explain the chromophoric concept, choice of solvent and applications of UV absorption spectroscopy.
4. Explain in detail the various stationary phase, mobile phase, detection and quantification methods employed in TLC.
5. Explain the principle involved in fluorimetric analysis. Discuss the various factors affecting the measurement of fluorescent intensity
6. List the different type of detectors used in GC and HPLC. Explain the working principle of one GC and one HPLC detector with the help of a neat diagrams
7. Explain the sample handling technique in IR including ATR technique.
8. What is the significance of statistical analysis. Define accuracy, precision, standard deviation and variance.
