

QP Code: 101350

Reg No:

First Year M.Pharm Degree Supplementary Examinations February 2017

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. Define & explain Beer Lambert's law and mention its limitations. Explain the working principle and various components of double beam UV-VIS spectrophotometer with the help of a neat diagram. (4+4+12=20)
2. Explain the principle and instrumentation of GLC with a neat diagram. Explain in detail about the derivatisation methods employed in GC with examples. (10+10=20)

Short Essays:

(6x10=60)

3. Explain the principle and instrumentation of atomic absorption spectrophotometer.
4. Describe the principle of FTIR with a neat diagram. Enumerate the differences between FTIR and dispersive IR instrument.
5. Define chemical shift. Explain why aromatic protons appear at down field region and acetylenic protons appear at up field region
6. Quenching of fluorescence and fluorescent immunoassay.
7. What is Miller's indices. Explain the principle and instrumentation of X-ray powder diffraction technique.
8. Explain in detail any two methods used in ionization of samples in mass spectrometry
