

MPY-101

M. Pharm. (First Semester)
EXAMINATION, Feb.-March, 2010
MODERN ANALYTICAL TECHNIQUES
(MPY-101)

Time : Three Hours

Maximum Marks : 75

Minimum Pass Marks : 38

Note : Attempt any five questions. All questions carry equal marks. Draw neat labelled diagram wherever necessary.

- ✓1. (a) Discuss the sample handling techniques used in IR spectroscopy.
(b) Describe the detectors used in UV visible spectrophotometer.
 2. Describe the construction and working of NMR spectrometer. Write in details about chemical shift.
 - ✓3. Write short notes on the following :
 - (i) Differential scanning calorimetry
 - (ii) Liquid centrifugation spectrometry
 - (iii) Optical rotatory dispersion
 - ✓4. Describe the components, working and application of HPLC.
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- ✓5. (a) Write advantages and applications of FTIR in structural elucidation.
(b) Explain Gel chromatography.
 6. Write principle and applications of light and phase contrast microscope.
 - ✓7. Discuss the theory, methods and applications of radio-immunoassay.
 - ✓8. Enumerate the principle of mass spectroscopy. Derive an expression, which governs the working of mass spectrometer. Draw neat and well labelled diagram of double focus mass spectrometer.