

September 2008

[KT 315]

Sub. Code : 2851

M.Pharm. DEGREE EXAMINATION.

(Regulation 2006)

First Year

Paper I — MODERN PHARMACEUTICAL
ANALYTICAL TECHNIQUES

(Common to all Branches)

Q.P. Code : 262851

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

- I. Long essay : (3 × 20 = 60)
- (a) Explain different parts of a HPLC with block diagram.
(b) Discuss the working and applications of FT-IR spectroscopy.
 - (a) Explain diagrammatically the working of mass spectroscopy. Comment on fragmentation pattern of any two compounds.
(b) Discuss the principle and applications of NMR spectroscopy.

3. (a) Give an account on the principle of spectrofluorimeter.

(b) Discuss the working and applications of detectors used in Atomic absorption spectroscopy.

II. Short notes : (8 × 5 = 40)

(1) Explain the working principle of electron spin resonance spectroscopy. Mention the differences between ESR and NMR.

(2) Discuss the spin-spin coupling in detail.

(3) Explain the principle of differential scanning calorimetry.

(4) Discuss the principle and applications of super critical fluid chromatography.

(5) Explain the applications of NOESY and COSY.

(6) Discuss the working and applications of detectors used in Gas chromatography.

(7) Explain the interpretation of diffraction patterns and its applications.

(8) Discuss the principle and limitations of Electron Spin Resonance Spectroscopy.