

[LG 340]

APRIL 2015

Sub. Code: 2901

M.PHARM. DEGREE EXAMINATION

(Common to all Branches)

FIRST YEAR

PAPER I – MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Q.P. Code : 262901

Time : Three hours

Maximum : 100 marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Explain the construction and working principle of Time of flight of mass analyser.
b) Explain in detail with examples the fragmentation pattern of organic compounds by mass spectroscopy.
2. a) Explain the principle, instrumentation and Pharmaceutical applications of DSC.
b) Explain the principle and instrumentation of Nuclear magnetic spectroscopy.

II. Write notes on:

(10 x 6 = 60)

1. With a neat diagram explain the construction and working of Hollow cathode lamp and Photomultiplier tube.
2. Explain the fundamental vibrations of the molecules in IR spectrophotometry.
3. Discuss theory of fluorescence with Jablonski diagram.
4. Write short notes on Chi-square test, correlation and regression.
5. Give an account of detectors used in HPLC.
6. Write a note on ¹³C-NMR and coupling constant.
7. Discuss the principle and applications of Radio Immuno Assay.
8. Briefly explain reverse phase chromatography and two dimensional chromatography.
9. Explain the application and various interferences occurring in Flame emission spectroscopy.
10. Write a note on thesis writing and citation of references.
