

MAY 2011

[KY 315]

Sub. Code: 2851

M.PHARM. DEGREE EXAMINATION

(Regulations 2006)

(For candidates admitted from 2006-2007 onwards)

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. Essay Questions:

(3 x 20 = 60)

1. a) Outline the principle behind NMR spectroscopy. Elaborate on factors which influence chemical shift
b) Comment on general fragmentation mode observed in mass spectroscopy.
2. a) Comment on IR spectra of a) amino acids b) aldehydes c) alcohols d) acids.
b) Explain briefly about the instrumentation of gas chromatography with a neat diagram.
3. a) Give the significance of students T test, Anova, regression analysis and correlation coefficient. (10)
b) Explain how X-rays are generated. (10)

II. Write Short Notes

(8 x 5 = 40)

1. Give the principle and working of flame emission spectrophotometer.
2. Define a) Column dead time
b) Capacity factor
c) Retention time
3. How will you differentiate the following pair of components by NMR spectroscopy
a) dibromoethane b) 1,2-dibromopropane
4. Discuss briefly about ESR and its application.
5. Write the principle and application of fluorimetry.
6. Give the construction and working principle of Time of Flight Mass analyser.
7. Compare the principle and working of Differential scanning calorimetry and Differential thermal analysis.
8. How will you distinguish between the following pair of compounds in IR spectra
a) Butanol and butane
b) Ethanol and ether
