

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[M.PHARM 1223]

DECEMBER 2023
(OCTOBER 2023 EXAM SESSION)

Sub. Code: 2981

M.PHARMACY DEGREE EXAMINATION
SEMESTER - I (PCI New Regulations 2016)
PHARMACOLOGY – MPL
PAPER I – MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Q.P. Code: 262981

Time: Three hours

Answer ALL Questions

Maximum: 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Write a brief account on Hyper Differential Scanning Calorimetry.
b) How X-rays are generated? Briefly explain Rotating crystal technique.
c) Write the applications of UV- spectra with suitable examples.
2. a) Explain the working of Mass spectroscopy.
b) Outline the principle behind NMR spectroscopy. Elaborate on factors which influence chemical shift.
c) Discuss the important features of the parent ion peak in Mass Spectrometry.

II. Write notes on:

(7 x 5 = 35)

1. Write the principle involved in Flame emission spectroscopy.
2. Instrumentation of Spectrofluorimetry.
3. Explain briefly about Zone Electrophoresis.
4. Discuss briefly about derivative UV spectroscopy.
5. Explain briefly about fundamental vibration.
6. Write the principle and working of Ion exchange chromatography.
7. Write an account on detectors used in HPLC.
