

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

[M.PHARM 1223]

DECEMBER 2023
(OCTOBER 2023 EXAM SESSION)

Sub. Code: 2941

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

Q.P. Code: 262941

Time: Three hours

Answer ALL Questions

Maximum: 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Draw a neat labeled diagram of double beam UV spectrophotometer and explain the principle and Instrumentation involved in UV spectroscopy.
2. a) The Molecular formula of a compound is $C_{11}H_{16}$. In the NMR spectra of the compound, the ratio of step heights a: b: c is 8.8: 2.9: 3.8. Calculate the number of protons for a, b, c.
b) Calculate the specific absorbance of the compound having a concentration of $c=5 \mu\text{g/ml}$ and whose Absorbance A is $=0.357$ at the wavelength 257nm in a 1 cm cell.
c) Write a detailed note on Gel chromatography.

II. Write notes on:

(7 x 5 = 35)

1. Write a note on Derivative spectroscopy.
2. Discuss the applications and sources used in IR.
3. Give an account on the instrumentation of spectro fluorimeter.
4. Describe the theory involved in Flame Emission spectroscopy.
5. Write a note on Quadrapole Mass analyser.
6. Write about the different detection techniques used in TLC.
7. Give an account of moving boundary Electrophoresis.
