

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

[M.PHARM 0524]

**MAY 2024
(APRIL 2024 EXAM SESSION)**

Sub. Code: 2931

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

Q.P. Code: 262931

Time: Three hours

Answer ALL Questions

Maximum: 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Explain dispersive and fourier transformer IR spectrometry.
b) Explain interpretation and baseline technique used in IR spectra.
2. a) Using simultaneous equation method find out concentration of A and B in mixture showing 0.3697 and 0.1805 respectively at 219nm and 256nm. Absorbance of standard compound A (9mcg/ml) at 219nm, 256 nm is 0.0297, 0.2751, respectively. Absorbance of standard compound B (10 mcg/ml) at 219nm, 256 nm is 0.7791, 0.117, respectively. The wavelength maxima of A is 256nm and B is 219nm.
b) Write basic concepts of TOF and Quatrapole Mass Spectrometry.

II. Write short notes:

(7×5 = 35)

1. Write on instrumentation and working of a high performance thin layer chromatography.
2. Explain determination of structure of compounds by using X-ray diffraction.
3. Write on detection of compounds in HPLC.
4. Give principles of ¹³C NMR and FT-NMR.
5. Briefly write on interferences in Atomic absorption and Flame emission spectroscopy.
6. Write on principles, exchanger mechanism in ion exchange chromatography.
7. Write process of fluorescence and its pharmaceutical applications.
