

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

[M.PHARM 0823]

**AUGUST 2023
(APRIL 2023 EXAM SESSION)**

Sub. Code: 2955

**M.PHARMACY DEGREE EXAMINATION
SEMESTER - II (PCI New Regulations 2016)
PHARMACEUTICAL ANALYSIS - MPA
PAPER I – ADVANCED INSTRUMENTAL ANALYSIS**

Q.P. Code: 262955

Time : Three hours

Answer ALL Questions

Maximum : 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Write the principle, instrumentation and solvent used in NMR.
b) Explain briefly about spin-spin and spin lattice relaxation process in NMR.
2. a) Discuss in detail Immobilized Polysaccharide CSP's and Enantiomer separations of pharmaceuticals in HPLC.
b) Write the principles instrumentations and gradient technique in High Performance Liquid Chromatography.

II. Write notes on:

(7 x 5 = 35)

1. Explain the principle of Ion Exchange Chromatography and types of resins used.
2. Write the principle and application of Super Critical Fluid Chromatography.
3. Write the applications of Mass Spectroscopy.
4. Explain about different types of detectors in Gas chromatography.
5. Discuss in detail about mass ESI technique in Mass Spectroscopy.
6. Write shortly about the method development and modes of Capillary Electrophoresis.
7. Discuss about the peak parameters of Gas Chromatography.
