

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

[MPHARM 0122]

**JANUARY 2022
(APRIL 2021 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) Explain the principle, instrumentation and detectors of HPLC.
b) Briefly outline the principles of FT-NMR with reference to ¹³C-NMR.
2. a) Explain the principle, instrumentation and application of super critical fluid chromatography.
b) Write the overview of capillary electrophoresis in pharmaceutical analysis

II. Write notes on:

(7 x 5 = 35)

1. Write the principle of 2D nuclear magnetic resonance.
2. Discuss the different types of ionization techniques in mass spectroscopy.
3. Explain the principle and application of ion pair chromatography.
4. Describe any two detectors used in gas chromatography.
5. Explain the size exclusion chromatography.
6. Write a brief note on coupling constant and chemical shift.
7. Write about practical aspects of preparative HPLC.
