

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

[MPHARM 0921]

**SEPTEMBER 2021
(OCTOBER 2020 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 application of gas chromatography.
b) Derivatization techniques of gas chromatography.
2. a) Explain the principle, instrumentation and application of NMR spectroscopy.
b) Discuss about Mass analyzers.

II. Write notes on:

(7 x 5 = 35)

1. Write difference between ^{13}C - NMR and ^1H - NMR.
2. Discuss about LC-MS.
3. Explain the principle and application of nano liquid chromatography.
4. Write about crown ethers in capillary electrophoresis.
5. Explain the affinity chromatography.
6. Write the chiral separation in pharmaceuticals.
7. Gradient high performance liquid chromatography.
