

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

[MPHARM 0122]

**JANUARY 2022
(APRIL 2021 EXAM SESSION)**

Sub. Code: 2901

**M.PHARMACY DEGREE EXAMINATION
FIRST YEAR - (Common to all Branches)
PAPER I – MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES
*Q.P. Code : 262901***

Time : Three hours

Answer ALL Questions

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Explain in detail about the theory and instrumentation of NMR.
b) Classify chromatographic methods based on mechanism of separation and add a note on Super Critical Fluid Chromatography.
2. a) Explain the theory of spectrofluorimetric method and give a comparison of fluorescence and UV-Visible absorption method.
b) Discuss in detail the various factors affecting vibrational frequency.

II. Write notes on:

(10 x 6 = 60)

1. Write a note on generation of X-rays and law governing X-ray diffraction.
2. Explain theory and methods in radio immuno assay and its applications.
3. Discuss on probability, accuracy, precision and Confidence interval.
4. Briefly explain the writing and presentation of thesis.
5. Give an account on principle and methodology of thermogravimetric analysis.
6. Describe stationary phases used in HPLC and GLC.
7. Explain the general fragmentation mode in mass spectroscopy.
8. Write the differences between ESR and NMR.
9. Discuss on various types of elution techniques in Column chromatography.
10. With the help of neat diagram, write the working principle of Atomic absorption spectroscopy. Add a note on its interferences.
