

Sl.No: M21130

Course Code: MPH101T

**VINAYAKA MISSION'S RESEARCH FOUNDATION
(DEEMED TO BE UNIVERSITY), SALEM**

**M.PHARM. DEGREE EXAMINATION – September 2021
First Semester**

BRANCH: PHARMACEUTICS

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Time : Three hours

Maximum: 75 marks

**(Draw neat labeled diagrams wherever necessary
your answer should be specific to the questions asked)**

SECTION –A

I. Answer any **THREE** questions: **(3 x 15 = 45)**

1. Discuss in detail instrumentation and principles involved in NMR spectroscopy.
2. Explain the principles and instrumentation of spectrofluorimeter with neat diagram.
3. Write the general fragmentation patterns for the interpretation of organic molecules in mass spectrometry
4. Give an exhaustive account of x-ray crystallography, explain significance of x-ray crystallography in herbal research.

SECTION –B

II. Answer any **THREE** questions: **(3 x 10 = 30)**

5. Outline the basic instrumentation of a gas chromatography with the help of a block diagram and its pharmaceutical application.
6. Describe the instrumentation and working of mass spectrometer and explain MALDI.
7. Discuss the electrophoresis and its pharmaceutical application.
8. Discuss the advantages of HPTLC over TLC.
