

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

[LQ 0121]

JANUARY 2021

Sub. Code: 2981

(APRIL 2020 EXAM SESSION)

M.PHARMACY DEGREE EXAMINATION

SEMESTER-I (PCI New regulations 2016)

PHARMACOLOGY – MPL

PAPER I – MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Q.P. Code : 262981

Time : Three hours

Answer ALL Questions

Maximum : 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Discuss the principle, instrumentation and applications of Spectrofluorimeter.
b) Explain Beer-Lambert's Law and describe about the deviations.
c) Write short notes on FT-IR.
2. a) Describe the working principle, instrumentation and applications of Differential Scanning Calorimetry (DSC).

b) Explain in detail about the different types of ionization techniques in Mass Spectroscopy.

II. Write notes on:

(7 x 5 = 35)

1. Write a note on Gel Chromatography.
2. Discuss the principle and working of Moving Boundary Electrophoresis.
3. What are the various factors influencing Chemical Shift?
4. Discuss in detail about X-Ray Diffraction Methods.
5. Describe the principle and instrumentation of Ion Exchange Chromatography.
6. Elaborate the Fragmentation Patterns and its Rule of organic compounds by Mass Spectrometry.
7. Explain the principle and instrument of Paper Electrophoresis with a neat labelled diagram.
