

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

**[M.PHARM 0922]**

**SEPTEMBER 2022  
(APRIL 2022 EXAM SESSION)**

**Sub. Code: 2931**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER - I (PCI New regulations 2016)  
PHARMACEUTICS - MPH  
PAPER I – MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES**

*Q.P. Code : 262931*

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. a. Define Zone electrophoresis. Explain its principle and instrumentation.  
b. Define Beer-Lambert law and its limitations.  
c. Define chromophore. Write notes on conjugation of chromophore.  
d. Give notes on Photomultiplier tubes.
2. a. Explain the principle and instrumentation of column chromatography.  
b. Give notes on principle and instrumentation of paper electrophoresis.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Define chromatography. Explain about its various separation methods.
2. Explain the relation between intensity of fluorescence and its concentration.
3. Explain about the X-ray microprobe analyzer.
4. Explain the principle and applications of Enzyme linked immunosorbent assay.
5. Review the factors affecting vibrational frequencies.
6. Explain the principle involved in electrophoresis techniques.
7. Define the following:  
a. Fluorescence   b. Phosphorescence   c. Absorption   d. Partition  
e. Emission.

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