

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

**[PHARMD 0522]**

**MAY 2022**

**Sub. Code: 3814**

**(APRIL 2022 EXAM SESSION)**

**PHARM. 'D' DEGREE EXAMINATION**

**THIRD YEAR (2009-2010 Regulation)**

**PAPER II – PHARMACEUTICAL ANALYSIS**

***Q.P. Code : 383814***

**Time : Three hours**

**Maximum : 70 Marks**

**I. Elaborate on:**

**(4 x 10 = 40)**

1. With a neat schematic diagram, explain the types of Pumps, Solvent Degassing system and detectors of HPLC.
2. What is electrophoresis? Explain the various methods of paper electrophoresis.
3. Explain the principle of liquid-liquid partition chromatography and write about the detection techniques in TLC.
4. State Beer's and Lambert's law. Explain the effect of solvent on absorption spectra. Define Auxochrome and hypsochromic shift.

**II. Write notes on:**

**(6 x 5 = 30)**

1. What are the differences between atomic absorption and flame emission spectroscopy?
2. Write the theory of NMR Spectroscopy.
3. What is group frequency & finger print region in IR Spectroscopy?
4. What is quenching? Write about the different types of quenching?
5. Distinguish between polarography and amperometry.
6. Explain the principle and instrumentation of polarimeter.

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