Sl.No. M21114 **Course Code:3200302**

VINAYAKA MISSION'S RESEARCH FOUNDATIONS
(Deemed to be University), SALEM

Pharm.D DEGREE EXAMINATION - September 2021
Third Year

PHARMACEUTICAL ANALYSIS

Time: Three hours Maximum: 70 marks

I. Write essays on any **TWO** questions: (2 x15 = 30)

1. Explain the principle and instrumentation of IR spectroscopy with a neat diagram. Write about sample handling in IR Spectroscopy.
2. Discuss the principle, various carrier gases and types of columns used in Gas Liquid Chromatography(GLC). Explain working principle of any two detectors used in Gas Liquid Chromatography(GAS)with a neat labeled diagram.
3. What is thermal analysis? Explain the principle, instrumentation and applications of Differential Scanning Calorimetry (DSC).

II. Write short answers on any **SIX** questions: (6 x 5 = 30)

4. Discuss the different types of currents in Polarography.
5. Discuss briefly about Erythrocyte Sedimentation Rate (ESR) and its applications.
6. Write a note on optical rotatory dispersion and circular dichroism.
7. Define electrode potential. Give example of reference and indicator electrode used in potentiometry.
8. What are the basic components of High Performance Layer Chromatography (HPTLC)? Write the applications of HPTLC.
9. Describe the various detection techniques in paper Chromatography.
10. Brief note about ISO 9000.
11. Define Beers and Lamberts law and derive the equation.

III. Write short notes on any **FIVE** question: (5 x 2 = 10)

12. Discuss about chemical quenching.
13. Factors affecting ion exchange separations in Ion exchange chromatography.
14. Types of peaks in mass spectroscopy.
15. Advantages of amperometric titrations.(Any four)
16. Define Retention Factor (Rf) Value.
17. Elution techniques in Column chromatography.

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