

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

Pharm.D DEGREE EXAMINATION - July 2019
Third Year

PHARMACEUTICAL ANALYSIS

Time: Three hours

Maximum: 70 marks

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

1. a) What are the different types of ion exchange resins used in ion exchange chromatography. (10)
- b) What are the basic components of a HPTLC instrument? Explain the advantages and application of HPTLC in pharmacy. (5)
2. a) Explain the basic for NMR spectroscopy. (5)
- b) With the aid of a neat diagram explain the various components of typical NMR instrument . (10)
3. a) Write the theory, apparatus working and applications of polarography. (10)
- b) Give an account of the principle and types of titration curve in amperometric titration. (5)

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

4. Explain the sample handling in IR spectroscopy.
5. Describe the ICH guidelines in details.
6. What is Quenching ? Write about the different types of Quenching.
7. Explain the ions procedure in mass spectrometry.
8. Explain about Braggs x- ray diffraction.
9. Describe the construction of Holloe cathode lamp.
10. Describe the DSC and its application.
11. What is electrode potential? Write about reference and indicator electrode.

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

12. Base peak.
13. Cell constant.
14. SCOT and WCOT column.
15. TQM.
16. Diffusion current.
17. Nernst - glower.