

**VINAYAKA MISSION'S RESEARCH FOUNDATIONS
(DEEMED TO BE UNIVERSITY), SALEM**

**B.PHARM. DEGREE EXAMINATION – July 2021
Seventh Semester**

INSTRUMENTAL METHODS OF ANALYSIS

Time : Three hours

Maximum: 75 marks

I. Write essays on any **TWO** questions: **(2 x 10 = 20)**

1. (a) Explain in detail about the principles involved in chromatography.
(b) Write the instrumentation and working procedure of HPLC with neat diagram.
2. Explain the principle and instrumentation of UV visible spectrophotometer.
3. (a) Explain the principle and instrumentation of fluorimeter.
(b) Write the factors affecting the fluorescence intensity.

II. Write short answers on any **SEVEN** questions: **(7 x 5 = 35)**

4. Write about electron capture detector used in gas chromatography.
5. Define electrophoresis. Write in detail about capillary electrophoresis.
6. Explain about Hollow Cathode Lamp with neat diagram.
7. Name the types of ion exchange resins used in ion exchange chromatography and explain.
8. Define and derive Beer lamberts law.
9. Write the reaction of amino acid with ninhydrin reagent in paper chromatography.
10. Describe the components of Nephelometer.
11. Different development techniques in paper chromatography.
12. Write a note on sample handling in IR spectroscopy.

III. Write short notes on : **(10 x 2 = 20)**

13. Define auxochrome and give examples.
14. What is silica gel GF?
15. What is Nernst globar?
16. Define static quenching.
17. Write about tailing factor.
18. Define luminescence and write its types.
19. Write the applications of electrophoresis.
20. Write any four detectors used in IR spectroscopy.
21. What is derivatization?
22. What is edge effect?
