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

B.PHARM. DEGREE EXAMINATION – October 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. i) Write the principle , instrumentation and applications of fluorimetry.   (7)
    ii) What are factors affecting fluorescence intensity.   (3)
2. i) Discuss about the different sampling methods in IR spectroscopy.   (5)
    ii)Give an account on different types of vibrations in IR spectroscopy.   (5)
3. Write the principle, instrumentation and applications of High Performance Liquid chromatography.

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

4. Write a brief on different types of electronic transitions in UV- Visible spectrophotometry.
5. Write down about the working of photomultiplier tube.
6. Summarize on the instrumentation of flame photometry.
7. Write the principle and applications of nepheloturbidimetry.
8. Inscribe the working procedure involved in TLC.
9. Compare and contrast Adsorption and partition chromatography.
10. List out the different characteristics of an ideal detector. Mention the different types of detectors used in GC.
11. Write the principle involved in ion exchange chromatography. List out the ideal characteristics of an ion exchange resin.
12. Write in detail about the steps involved in affinity chromatography.

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

13. Define auxochrome and chromophore.
14. What is bathochromic shift?
15. Name the different light sourced used in IR spectroscopy.
16. Write the principle involved in atomic absorption spectroscopy.
17. List out the different mechanism used in chromatography.
18. Write various types Paper chromatography.
19. What are different temperature programmings in GC.
20. List out the few commonly used detectors in HPLC.
21. Write the principle involved in gel chromatography.
22. What is a ligand? Give examples.

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