B.Sc. DEGREE EXAMINATION,NOVEMBER 2018
III Year V Semester
Core Major - Paper XII
ANALYTICAL CHEMISTRY - I

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. List the uses of sequestering agents.
2. Differentiate post-precipitation and co-precipitation.
3. Define the term sublimation.
4. What is the purpose of vacuum distillation?
5. What are the factors affecting R_f value?
6. Mention the applications of gas chromatography.
7. What are auxochromes?
8. Where does carbonyl group normally appear in the IR spectra?
9. Define the term accuracy.
10. State the principle involved in thermo gravimetric analysis?
11. Proper choice of precipitants is needed. Why?
12. What are the absorbents used in column chromatography?

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. Describe the characteristics of precipitating agents.
14. Discuss in detail paper chromatography.
15. Write a note on fractional distillation.
16. Explain Stoke's line and anti- Stoke's line in Raman spectroscopy.
17. Mention different types of the errors with suitable examples.
18. Explain mutual exclusion principle with suitable example.
19. Draw the block diagram of differential thermal analysis and describe the terms.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. a. Explain steam distillation with suitable diagram.
    b. Write the structures and applications of cupferron and EDTA.

21. a. Discuss the solvent extraction process.
    b. How will you separate the mixture of benzene & toluene.

22. a. Write a note on electrophoresis.
    b. How will you separate chloride and bromide in a mixture by ion exchange chromatography?

23. a. Describe the types of electronic transitions.
    b. Draw the block diagram of IR spectrometer.

24. a. Write a note on thermometric titration.
    b. How is adulteration detected in coffee powder and pulses?

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