

**BSIC - MJ301****B.Sc. DEGREE EXAMINATION, NOV./DEC. - 2024****(THIRD SEMESTER)****INDUSTRIAL CHEMISTRY****Chemical Analysis (major)****(w.e.f. 2023-24 Admitted Batch)****Time : 3 Hours****Max. Marks : 75****SECTION - A****Answer any five questions.****[5 × 5 = 25]**

1. Explain about Applications of solvent extraction.
2. Write a note on significant figures.
3. Explain the separation of amino acids in paper chromatography.
4. Explain Equivalent and molar conductance.
5. Write about the importance of R<sub>f</sub> values.
6. What are the uses of paper chromatography?
7. Explain Laws of Absorption.
8. Write about instrumentation of Gas chromatography.

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### SECTION - B

Answer all questions : [5 × 10 = 50]

9. a) Explain statistical treatment of data.  
OR  
b) Explain factors favouring solvent extraction and solvent extraction equilibrium.
10. a) Explain paper chromatography.  
OR  
b) Explain column chromatography technique.
11. a) Explain procedure and applications of thin layer chromatography.  
OR  
b) Explain procedure of Gas chromatography.
12. a) Explain potentiometric titrations with examples.  
OR  
b) Write about Quinhydrone, antimony and glass electrodes.

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13. a) Write about conductometric titrations with examples.

OR

- b) Explain the spectrophotometric determination of chromium and manganese in steel.

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