



SHREE H. N. SHUKLA GROUP OF COLLEGES

(AFFILIATED TO SAURASHTRA UNIVERSITY & GTU)

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Near amrapali railway crossing,
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Behind marketing yard,
Near Lalpari lake, Between
Amargadh-Bhichri,
Rajkot- 360 002.
Ph.No. 90990 63150

M.Sc. Chemistry Semester III (CBSE)

C-301 Chromatography techniques

Question bank

Prepared by,
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Q. Give the answer of each question (Each questions has two marks)

- Q 1. Differentiate between TLC and HPTLC
- Q 2. Write down the advantages and disadvantages of HPTLC
- Q 3. Explain Solvents used as mobile phase in TLC system
- Q 4. What is stationary phase? Write down its criteria.
- Q 5. What are hyphenated techniques? Gives advantages of it's with suitable examples.
- Q 6. Explain silulation used in chromatography techniques.
- Q 7. Explain EDDY diffusion observed in column chromatography.
- Q 8. Explain Cation exchanger used in ion exchange chromatography.
- Q 9. What is gradient elution and how it is differ from isocratic elution.
- Q 10. Gives the types of chromatography according to types of stationary phase and mobile phase nature.
- Q 11. Explain mechanisms of ion exchange chromatography.
- Q 12. Mention difficulties arises when LC coupled with MS.
- Q 13. Express the number of theoretical plate N.

Q. Give the answer of each question (Each question has three marks)

- Q 1. Explain the flame ionization detector, thermal conduct detector briefly.
- Q 2. Differentiate
GSC and GLC
GLC and HPLC
- Q 3. Briefly explain electron capture detector.



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- Q 4. Draw the labeled diagram of GC and explain any three components of them.
- Q 5. Derived and explain van deemter equation.
- Q 6. What is super critical fluid chromatography? Give the characteristics of super critical fluids.
- Q 7. Difference between packed and capillary column. Which types of stationary phase are used in packed and capillary column?

Q. Give the answer of each question (Each question has five marks)

- Q 1. Write note on ion exchanger?
- Q 2. What are problem arises when LC coupled with MS. Discuss the interface system used in LC-MS.
- Q 3. Draw the block diagram of HPLC and Explain each components used in its?
- Q 4. Give the concept of selectivity, sensitivity, LOD and LOQ for detector.
- Q 5. Explain Ion exchange chromatography with different ion resin used in it.
- Q 6. Draw the labeled diagram of HPLC and described detectors used in it.
- Q 7. Write down different types of column used in HPLC chromatography techniques.
- Q 8. Discuss the types of matrix used in ion exchange chromatography.
- Q 9. Explain LC-MS-MS hyphenated technique.