BP701T: Instrumental Methods of Analysis (Theory) Question Bank

5. Unit V: Ion Exchange Chromatography, Gel Chromatography, Affinity Chromatography (7 Hours)

5.1 10-Mark Questions

1. Explain the principle, types of ion exchangers, and applications of Ion Exchange Chromatography.* [May 2022, Oct 2024]
2. Describe the theory, instrumentation, and applications of Gel Chromatography.* [May 2022, May 2024]
3. Discuss the principle, mechanism, and applications of Affinity Chromatography.
4. Explain the classification, properties, and methodology of Ion Exchange Chromatography.
5. Describe the factors affecting ion exchange and their significance in analytical applications.

5.2 5-Mark Questions

1. Explain the types of ion exchange resins used in Ion Exchange Chromatography.* [Dec 2021, Aug 2023, Dec 2023]
2. Write a note on the principle and applications of Affinity Chromatography.* [Oct 2022]
3. Discuss the mechanism and factors affecting Ion Exchange Chromatography.* [Aug 2023]
4. Explain the principle and applications of Gel Filtration Chromatography.* [Oct 2022, Oct 2024]
5. Write a note on the properties of ion exchange resins and their role in chromatography.
6. Describe the instrumentation of Gel Chromatography.
7. Explain the support materials used in Affinity Chromatography and their significance.

5.3 2-Mark Questions

1. Write two applications of Affinity Chromatography.* [Dec 2021, May 2022, Oct 2024]
2. What is Gel Chromatography?* [Dec 2023, May 2024]
3. Name two support materials used in Affinity Chromatography. [Aug 2023]
4. List two applications of Ion Exchange Chromatography. [Dec 2023]
5. What is the capacity factor in Ion Exchange Chromatography? [Mar 2023]
6. Define the mechanism of Ion Exchange Chromatography. [Dec 2023]
7. What are ion exchange resins? Give one example. [Dec 2021]
8. Name two factors affecting Ion Exchange Chromatography. [Dec 2023]
9. What is the principle of Gel Filtration Chromatography? [Oct 2022]
10. Write one application of Gel Chromatography. [Mar 2023]