

## BP701T: Instrumental Methods of Analysis (Theory) Question Bank

### 3. Unit III: Introduction to Chromatography, Column Chromatography, TLC, Paper Chromatography, Electrophoresis (10 Hours)

#### 3.1 10-Mark Questions

1. Explain the principle, preparation, procedure, and detection methods in Column Chromatography.\* [Aug 2023]
2. Discuss the principle and instrumentation of Capillary Electrophoresis.\* [Dec 2021]
3. Explain the theory, methodology, and applications of Paper Chromatography.
4. Describe the principle, methodology, and applications of Thin Layer Chromatography (TLC).
5. Discuss the factors affecting electrophoretic mobility and the applications of electrophoresis.

#### 3.2 5-Mark Questions

1. Explain the preparation and activation of TLC plates.\* [Dec 2021, Mar 2023, Oct 2024]
2. Describe the different detection techniques used in Paper Chromatography.\* [Dec 2021, May 2022, Dec 2023, Oct 2024]
3. Write a note on the principle and applications of Gel Electrophoresis.\* [Dec 2021, Oct 2022, May 2024]
4. Explain the methodology and advantages of Adsorption and Partition Column Chromatography.
5. Discuss the development techniques used in Paper Chromatography.\* [Dec 2021]
6. Write a note on the factors affecting R<sub>f</sub> values in TLC.
7. Explain the principle and applications of Paper Electrophoresis.\* [Dec 2021]

#### 3.3 2-Mark Questions

1. What is R<sub>f</sub> value? How is it determined?\*[Dec 2021, May 2024]
2. Name two inorganic adsorbents used in TLC.\* [Dec 2023]
3. What is the edge effect in chromatography?\*[May 2022, Oct 2024]
4. Write two applications of Paper Chromatography. [May 2022]
5. What are two grades of paper used in Paper Chromatography? [May 2024]
6. List two applications of Capillary Electrophoresis.\* [Dec 2023]
7. What is normal phase chromatography? [May 2022]
8. Define resolution in chromatography. [Mar 2023, May 2024]
9. What is silica gel GF? [Dec 2021]
10. Name two factors affecting electrophoretic mobility. [Dec 2021]