

**UG 3<sup>rd</sup> Semester Examination 2022**

**CHEMISTRY [HONOURS]**

**Course Code: HSEC-1B**

**Full Marks: 10**

*Answer any five questions*

[2×5=10]

1. What do you mean by paper chromatography?
2. Define  $R_f$  value in chromatographic separation.
3. What is Complexometry? What are the conditions of a feasible Complexometric Titration?
4. Give a suitable example for a) Cation exchange resin  
b) Anion exchange resin.
5. In paper chromatography separation of silver, lead and Hg the solvent front was 18 cm while front due to these elements were respectively 16, 12 and 6 cm. What is the  $R_f$  value of all metals.
6. 6 ml of waste water is diluted to 300 ml distilled water in a standard BOD bottle. Initial DO in the bottle is determined to be 8.5 mg/l. DO after 5 days at 20 °C is found to be 5 mg/l. Determine  $BOD_5$  of waste water and compute the ultimate BOD.