

WEST GOALPARA COLLEGE

Sessional Examination-2023

B. Sc. 4th Semester

Paper:- CHE-HC-4036: PHYSICAL CHEMISTRY-IV

Full Marks: 20

Time: 1 hour

1. Answer the following questions (any two)
 - a) Define ionic product. How do it related with solubility product? 2
 - b) How molar conductance varies with dilution for strong and weak electrolyte. 2
 - c) Explain the mechanism of buffer solution with an example. 2
 2. State Kohlrausch law of independent migration of ions. The molar conductance at infinite dilution of NaCl, HCl, and CH₃COONa are 126.45, 426.14, and 91.01 cm²mol⁻¹. Calculate the molar conductance of CH₃COOH. 1+2=3
 3. Derive Ostwald's dilution law for a weak acid 3
 4. Write short note (any two) 2½ + 2½ = 5
 - a) Asymmetric effect
 - b) Faraday's first law of electrolysis
 - c) pH scale
 5. Prove that the transference number is proportional to the velocity of the ions. 5
- or
- Write the principles of conductometric titration. 5

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