

Government General Degree College, Dantan-II
B. Sc (H) 4th Semester Internal Evaluation-2020
Subject: Chemistry **Paper: GE-4 (T+P)**
F.M: 20 (Theory) + 10 (Practical) **Time: 2 h**

Answer any **one question** from each Group.

Group A : Theory

1. (a) Define phase and component.
(b) Derive thermodynamically Gibbs Phase Rule.
(c) Draw and explain phase diagram of water.

2. (a) Define specific conductance and molar conductance.
(b) Explain the variation of equivalent conductance with dilution for strong and weak electrolytes.
(c) What is transport number? Explain how transport number varies with temperature.

3. (a) State Faraday's laws of electrolysis.
(b) Explain how electromotive force of a cell is measured experimentally.
(c) Write short note on quinhydrone electrode.

4. (a) Write short note on Thin layer chromatography.
(b) What is photochemical smog?
(c) Explain radioactive pollution and their effects on animal and plant life.

Group B : Practical

1. Write the principle of conductometric titration.

2. Explain the procedure of potentiometric titrations of Potassium dichromate vs. Mohr's salt.

3. Explain the method of determination of the critical solution temperature and composition of the phenol water system

4. Write the principle for determination of total hardness of water.