

B.Sc. (FS) Semester - 6 (NEP-2020) Examination**March/April-2026****CHE: Minor Chemistry-303 (Minor-6)****Time: 2:00 Hours****Marks: 50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 Answer any two out of three in details. (10)
- 1) Discuss the Common Ion Effect and solubility product in detail.
 - 2) Write a short note on cobalt nitrate test with equations.
 - 3) Explain any three dry tests for negative with equations.
- Que.2 Answer any two out of three in details. (10)
- 1) List out factor affecting completeness of Precipitation. Explain any three of them.
 - 2) What is Super-saturation? State Von-Weimarn equation and explain its role.
 - 3) What is a precipitate? Explain the important properties of precipitates relevant to gravimetric and qualitative analysis. Classify the types of precipitates and define each type.
- Que.3 Answer any two out of three in details. (10)
- 1) Write a short note on role of Various plant nutrients in growth of plant.
 - 2) Write detailed note on production of Ammonium Nitrate.
 - 3) Give synthesis of Calcium cyanamide and explain its importance as fertilizer.
- Que.4 Answer any two out of three in details. (10)
- 1) What is normal super phosphate? Describe Den process for the manufacturing of normal super phosphate.
 - 2) Give detail note on Potassium fertilizer.
 - 3) Write a note on manufacturing process of Diammonium Phosphate.
- Que.5 Answer any two out of three in details. (10)
- 1) What is flame test? Explain its principle, procedure, and analytical significance in the identification of metal ions.
 - 2) Explain the principle and procedure of the precipitation method used in gravimetric analysis.
 - 3) Explain Sindri Process with schematic diagram
 - 4) Write a short note in NPK fertilizer.
