

B.Sc. Semester - 5 (NEP-2020) Examination**Oct/Nov - 2025****CHE: Higher Chemistry-301 (Major-11)****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 the following question. (Any two) (10)
- (1) Define amino acid and give classification of it based on chemical nature.
 - (2) Explain Erlenmeyer Azlactone synthesis with suitable example.
 - (3) Explain Bergmann method for synthesis of poly peptide with suitable example.
- Que.2 Answer the following question. (Any two) (10)
- (1) Give difference between nucleoside and nucleotide.
 - (2) Discuss: Working method of Ascending paper chromatography in detail.
 - (3) Explain TLC in detail
- Que.3 Answer the following question. (Any two) (10)
- (1) Write reactions and products of Glucose with various reagents used to determine constitution of Glucose.
 - (2) Write short note on Osazone formation from Glucose and Fructose.
 - (3) Write conversion of aldopentose to ketopentose with suitable example.
- Que.4 Answer the following question. (Any two) (10)
- (1) Explain Mohar's method for precipitation titration.
 - (2) Explain Iodometry titration.
 - (3) Explain types of errors.
- Que.5 Answer the following question. (Any two) (10)
- (1) Write chemical properties of amino acid due to amino group with suitable examples.
 - (2) Draw structure of Adenine, Guanine, Cytosine, Uracil and Thymine.
 - (3) Prove Pyranose ring structure of Glucose using methylation method.
 - (4) Explain Neutralization titration curve between strong acid and strong base.
