

Unit IV

8. (a) Describe three important electrodes used in chemical laboratories. 5
- (b) Explain the calibration and maintenance of pH meters. 5
9. Describe the calibration and maintenance of : 5,5
- (i) Spectrophotometer
- (ii) Refractometer.



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Roll No.

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B.Sc. (Hons.) (NEP-2020) (UTD)

EXAMINATION, 2025

(Second Semester)

CHEMISTRY SKILLS-I

B-23-CHE-205

Time : 3 Hours]

[Maximum Marks : 50

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) What is % w/w ? 2
- (b) What do you mean by standardization of solutions ? 2
- (c) What is Calibration ? 2
- (d) What is glass electrode ? 2
- (e) How does crystallization purify chemicals ? 2

Unit I

2. (a) Describe the general rules of chemical labelling. 3
- (b) Write a note on the handling of glassware. 3
- (c) Explain the basic rules of sodium metal disposal. 4
3. Describe the following terms : 10
 - (i) Specific gravity
 - (ii) Equivalent mass
 - (iii) Molarity
 - (iv) Molality
 - (v) Normality.

Unit II

4. (a) Explain the determination of percentage purity using an example. 5
- (b) Differentiate between primary and secondary standards. 5
5. (a) What are Indicators ? Explain the preparation of two types of indicator solutions. 6
- (b) Explain different types of buffer solutions. 4

Unit III

6. (a) Describe the preparation of complexometric solutions. 5
- (b) What is chemical waste ? Explain its proper management. 5
7. Describe the main methods of purification of chemicals. 10