**ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD**

**Faculty of Education**

**(Department of Science Education)**

**WARNING**

1. **PLAGIARISM OR HIRING OF GHOST WRITER(S) FOR SOLVING THE ASSIGNMENT(S) WILL DEBAR THE STUDENT FROM THE AWARD OF DEGREE/CERTIFICATE IF FOUND AT ANY STAGE.**
2. **SUBMITTING ASSIGNMENT(S) BORROWED OR STOLEN FROM OTHER(S) AS ONE’S OWN WILL BE PENALIZED AS DEFINED IN “AIOU PLAGIARISM POLICY”.**

**Course: Chemistry-V (8672) Semester: Spring, 2025**

**Level: B.Ed. (2.5/4.0Year)**

**Credit Hours: 3**

**Please read the following instructions for writing your assignments. (AD, BS, BEd, MA/MSc, MEd) (ODL Mode).**

1. All questions are compulsory and carry equal marks but within a question the marks are distributed according to its requirements.

2. Read the question carefully and then answer it according to the requirements of the questions.

3. Avoid irrelevant discussion/information and reproducing from books, study guides, or allied material.

4. Handwritten scanned assignments are not acceptable.

5. Upload your typed (in Word or PDF format) assignments on or before the due date.

6. Your own analysis and synthesis will be appreciated.

7. Late assignments can’t be uploaded at LMS.

8. The students who attempt their assignments in Urdu/Arabic may upload a scanned copy of their handwritten assignments (in PDF format) on University LMS. The size of the file should not exceed 5MP.

**Total Marks: 100 Pass Marks: 40**

**ASSIGNMENT No. 1**

**(Units 1–4)**

***Note: Attempt all questions. All questions carry equal marks***

Q.1 Read unit 1 and watch videos from the link given in unit 1 and answer the following questions. **(**5+15)

 i. Differentiate molar refraction and molar refractivity.

 ii. Determine the Molecular Refractivity of Liquid

Q.2 i. Discuss the commercial method used to determine the viscosity of molasses.

 ii. Explain Rheochor with temperature variation. (10+10)

Q3. i. Why is pH range important in chloride determination?(5+15)

 ii. Find Out the percentage purity of NaCl. You are provided with 0.05M AgNO3.

Q.4 Explain the following important Chemical Tests for the detection of Functional Groups: (20)

1. Sodium fusion test 2. Bromine Water Test

Q.5 How will you determine the %age purity of K2Cr2O7, when you are provided with the 0.5 M Mohr’s salt solution is provided? (20)

**Total Marks: 100 Pass Marks: 40**

**ASSIGNMENT No. 2**

**(Units 5–9)**

Q.1 Discuss in detail the theory and procedure of determination of Ca+2 and Mg+2 in the Sample (Hard water) by using EDTA**.** (20)

Q.2 Discuss the Principle of Conductometric Titration and Explain the procedure of Conductometer Titration using Conductivity Bridge. (20)

Q.3. Describe the Principle of Determination of Molecular Weight of a Carboxylic Acid and then explain the procedure for its experiment along with the stages involved. (20)

Q.4 What is meant by Iodometric Titration? Explain the procedure and equation involved in the Standardization of Na2S2O3. 5H2O Solution. (20)

Q.5 Discuss the advantages and disadvantages of the basic experimental techniques in organic chemistry. (20)