# ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD

**(Department of Science Education)**

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**WARNING**

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

**Course: Biology- V (8673) Semester: Spring, 2025**

**Level: ADE/BEd/BS 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. However, 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 5MB.

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.

**Total Marks: 100 Pass Marks: 50**

**ASSIGNMENT No. 1**

**(Units: 1-4)**

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

Q.1 Write the procedure of practical of the practical processes of Osmosis and Diffusion. (20)

Q.2 Write procedures for the study of a transverse section of a monocot root and stem. Elaborate difference in T.S. of monocot root and stem. (20)

Q.3. Compare the characteristic features of the family Rosaceae (Rose Family) and Fabaceae

 (Leguminosae). (20)

Q. 4 Why do we need to preserve specimens? What chemicals are used to preserve a specimen? Give examples. (20)

Q.5. Write a report on observations of house flies and bees. Write the differences in characters and behaviors of the house fly and the bee. (20)

**Total Marks: 100 Pass Marks: 50**

**ASSIGNMENT No. 2**

**(Units: 5-9)**

Q.1 Give a comprehensive detail of the test for reducing sugars. (20)

Q .2 a) Write procedures and necessary chemicals for Benedict’s test, Fehling’s Solution test.

 b) Write six steps to prepare permanent slides for animals? (20)

 Q.3 Describe the complete process for RNA Extraction using TRIZOL or the Local Method.

 (20)

Q. 4 Perform a survey Study of a Genetic Factor in the Population and write its frequency in your Geographic area. (20)

 Q. 5 After studying slides of Amoeba, Paramecium, Euglena, and plasmodium, draw labelled

 diagrams of these organisms. (20)