

Form Number: OBE/TE/Spring-2026



Daffodil International University

Department of Textile Engineering

Faculty of Engineering

Final Examination, Semester: Spring-2026

Course Code: 0531-121

Level & Term: LIT3

Name & Designation of the Course Teacher: Dr. ABM Nazmul Islam (DNI), Assistant Professor

Course Title: Chemistry II

Sections: H1,H2,H3,H4

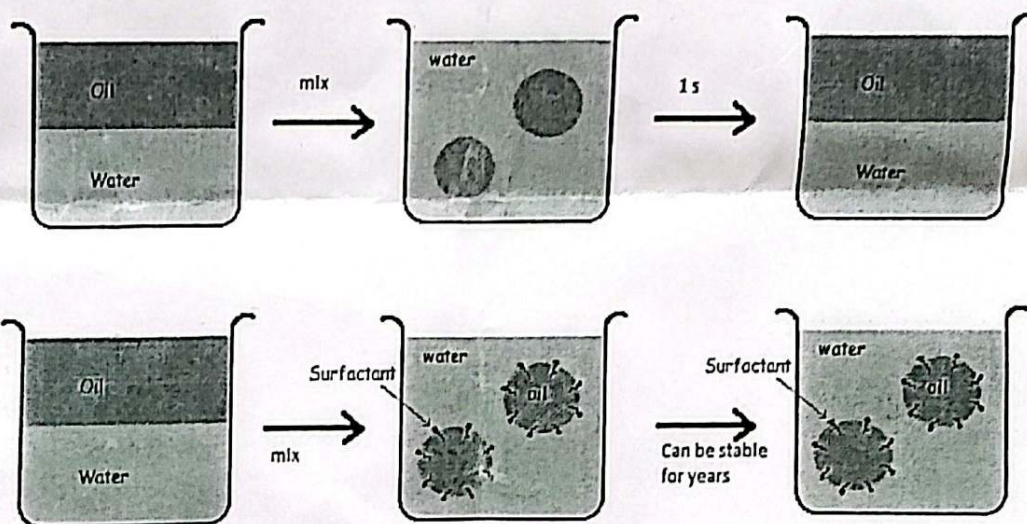
Time: 02 hours.

Total Marks: 40

Answer all the questions:

1. a. Analyze the diagram in terms of emulsification of surfactants
[CO 2, PO 2, C/L 4]

3



- b. Appraise the specialty of saponin and beta cyclodextrin as a biosurfactant.
[CO2, PO 2, C/L 4]

6

- c. Explain the following: synthetic detergents and their classification.
[CO 2, PO 2, C/L 2]

6

2. a. Sketch the structural formulas of the following amino acids: lysine, valine, phenylalanine, and serine. Additionally, prepare one dipeptide and one tripeptide using any combination of these amino acids.
[CO 3 PO 1, C/L 2]

4+2

- b. "Glycine acts as a zwitterion"- explain. Illustrate its behavior in basic solution.
[CO 3, PO 1, C/L 2]

2+4

- c. Elaborate your understanding on chromophore. Discuss in detail the following classification of textile dyes: Disperse dye, vat dye, and mordant dye.
[CO 3, PO 1, C/L 2]

4+9