ourdiu.com | Shared by Afzal Mamun Raj

Daffodil International University
Department of Agricultural Science
Faculty of Health & Life Sciences
Mid-term Examination, Fall 2025

Course Code: 0814-1205
Course Title: Agricultural Chemistry -I (Fertilizers, Agro Chemicals & Environmental Chemistry)
Section: 251 All
Level-Term: L-1, T-3
Teacher's Initial: MSA
Full Marks: 25
Time: 1 Hour 30 Minutes

"Split answering is strictly prohibited"

1.a)	Define colloids with examples. Briefly write about four main applications of colloids in everyday life or industry.	(PLO1,CLO1,C1)	3
b)	List the name of 17 essential plant nutrients.	(PLO1,CLO2,C1)	2
2.	A mixed-crop farm is experiencing caterpillars on cabbage, aphids on tomato, rodents in storage, and general pests on leafy vegetables. Using pesticide classification by mode of action, describe contact, stomach, systemic, and fumigant pesticides and suggest an appropriate example for controlling the pests in this scenario.	(PLO1,CLO3,C3)	5
3.	You are managing a vegetable farm facing pest problems such as aphids, caterpillars, and whiteflies. Using the principles of Integrated Pest Management (IPM), describe a management plan that includes different types of biological control methods. Explain how biopesticides can be integrated into your plan and justify their use in relation to sustainability and environmental safety.	(PLO3,CLO3,C3)	5
4.	Explain the process of biogas production from organic waste, including anaerobic digestion, how biogas is generated and collected, and the role of microorganisms. Also, compare natural gas and biogas.	(PLO2,CLO6,C4)	5
5.a)	Define bioenergy. Describe the main ways biomass is converted into energy, including direct combustion, thermochemical conversion, and biochemical conversion, and how each process produces energy.	(PLO4,CLO6,C2)	3
b)	Imagine you are a social media influencer. In about 70 words, write a tweet or Facebook post to raise awareness among your followers about the dangers of hazardous waste. Make your message clear and convincing, showing you understand the risks and how to communicate them effectively.	(PLO2,CLO6,C2)	2

ourdiu.com