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Daffodil International University
Department of Agricultural Science
Faculty of Health & Life Sciences
Mid-term Examination, Spring 2026

Course Code: 0814-1205
Section: 252 All
Full Marks: 25

Course Title: Agricultural Chemistry -I (Fertilizers, Agro Chemicals & Environmental Chemistry)
Level-Term: L-1, T-3

Teacher's Initial: MSA
Time: 1 Hour 30 Minutes

"Split answering is strictly prohibited"

1.a)	Write a brief note on nutrient uptake through the soil–root interface and movement through the root.	(PLO1,CLO2,C1)	3
b)	List the name of available form of each macronutrient.	(PLO1,CLO2,C1)	2
2.	Describe how ideas about plant nutrition developed over time. Start with the earliest beliefs about how plants get food. Then explain the experiment that tested whether plants grow only from water. Next, describe the findings that proved minerals from soil are important. Finally, explain how scientists learned that plant growth can be limited if any essential nutrient is missing.	(PLO1,CLO4,C3)	5
3.	Imagine you are an agricultural advisor tasked with managing pests in a crop field in Bangladesh. Design a complete Integrated Pest Management (IPM) plan. Describe how you would monitor pests, identify the main problems, and decide on control measures. Include strategies such as cultural, mechanical, biological, and chemical methods, and explain the use of natural enemies and biopesticides. Discuss how your plan minimizes environmental impact and promotes sustainable crop production.	(PLO3,CLO4,C3)	5
4.	Define pesticide formulations and classify them. Describe any one liquid formulation.	(PLO2,CLO3,C4)	5
5.a)	Pesticides are used to kill pests, and different pesticides act in different ways. One type works through the plant's xylem and phloem transport system. Can you describe how this type of pesticide functions inside the plant and explain why it is especially effective against certain pests?	(PLO4,CLO3,C2)	3
b)	Write a short brief about synthetic organic pesticides.	(PLO2,CLO3,C2)	2