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Daffodil International University

Department of Agricultural Science
Faculty of Agricultural Sciences
BSc. in Agricultural Science
Midterm Examination-Fall 2026

Course Code: 0811-3201 **Course Title: Agronomy III(Cropping System and Crop Farm Management)**

Level and Term: L2 S2 **Section: All** **Course Teacher Initials: UHH**

Time: 1 hour 30 Minutes **Total Marks: 25**

Splitting any answer is strictly prohibited

			Marks	
1	(a)	Define multiple cropping and crop diversification.	CLO1, PLO1 C1	2
	(b)	List any six types of multiple cropping.	CLO1, PLO1 C1	3
2	(a)	Explain how an intercrop can yield more than the corresponding sole crops (ecological basis of intercropping).	CLO1, PLO1 C2	3
	(b)	Describe how crop rotation, with a legume in the sequence, breaks pest and disease cycles and improves soil fertility.	CLO1, PLO1 C2	2
3		A cropping pattern survey of a locality with a net cultivated area of 100 ha recorded the following crops in one year: T. Aman rice 70 ha, mustard 40 ha, wheat 20 ha, potato 10 ha and mungbean 20 ha. (a) Calculate the gross cropped area and the cropping intensity of the locality. (b) Using the area under each crop as a proportion of the gross cropped area, calculate the Simpson diversification index and state whether crop diversification is low or high.	CLO2, PLO3 C3	(3+2) 05
4		A farmer in a medium-highland area of Bangladesh follows the Boro-Fallow-T. Aman pattern on 1 ha. The Kharif-1 season of about 100 days is left fallow, and yields are falling because of rice after rice. Applying the steps of planning a crop rotation (resource inventory, household requirement, candidate crops, crop calendar with turnaround time, application of rotation principles, economic test, and records), propose a diversified rotation for this farmer, write it in correct cropping-pattern notation, and include a pulse crop.	CLO2, PLO3 C3	5
5	(a)	The Boro-Fallow-T. Aman pattern covers about 27 per cent of the net cropped area of Bangladesh. Analyze why this pattern dominates, using any three of the five groups of determinants (physical, biological, socio-economic, technological, institutional) with one Bangladeshi example under each.	CLO2, PLO3 C4	3
	(b)	The sole yields of wheat and lentil were 4.20 and 1.50 t/ha, and their intercrop yields were 2.60 and 0.55 t/ha. Calculate the partial LERs and the total LER, and analyze whether the intercrop should be recommended and which component is dominated.	CLO1, PLO1 C4	2