

GWANDA STATE UNIVERSITY



FACULTY OF NATURAL RESOURCES MANAGEMENT AND AGRICULTURE

DEPARTMENT OF HORTICULTURE AND CROP PRODUCTION

BACHELOR OF SCIENCE HONOURS DEGREE IN CROP SCIENCE

Perennial Crop Production /Agronomy of Plantation Crops

LCS 2205 / LCS 2210

Second Semester Final Examination Paper

June 2023

This examination paper consists of 3 pages.

Time Allowed: 3 Hours
Total Marks: 100
Special Requirements: None
Examiner's Name: R. Mapuranga

INSTRUCTIONS

1. This paper contains four (4) sections with a total of seven (7) questions.
2. Answer **FIVE (5)** questions, QUESTION ONE in Section A, and at least ONE QUESTION from SECTION B, C, and D
3. Start each question on a new page.

MARK ALLOCATION

QUESTION	MARKS (PER QUESTION)
Question 1 – 7	20
TOTAL ATTAINABLE MARKS	100

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Section A: Principles of plantation agriculture [Answer all questions]

1. (a) Distinguish between perennial, biannual, and annual crops, give examples of each [6]

- (b) Copy and complete the following table

Family	Common name	Species (botanical name)	Distribution in Zimbabwe
	Sugarcane		
Rubaceae		<i>Coffea arabica</i>	
Euphorbiaceae			Zvimba, Murerwa and Mutoko are the top producer; production is however scattered throughout the whole country [5]
	Macadamia		

- (c) Discuss any four (4) factors to consider in marketing of perennial crops [8]
- (d) A rootstock is a young shoot or twig of a plant, especially one cut for grafting. True or False? [1]

Section B: Beverage crops [Answer at least one (1) question from this section]

2. (a) Copy and complete the following table

Disease	Host crop	Causative agent	Control strategy
	Tea		
	Coffee		
	Sugarcane		
	Sugarcane		

- (b) Using examples, outline the economic importance of major beverage crops in Zimbabwe [12]
3. (a) List any four (4) signs of mature coffee berries [2]
- (b) Differentiate between selective picking and strip picking during coffee harvesting [4]

- (c) Outline the six steps in the post-harvest processing of coffee [14]

Section C: Tropical fruits [Answer at least one (1) question from this section]

4. (a) List the main banana cultivars and describe their characteristics [12]
(b) Describe any four (4) cultural practices in banana production [8]
5. (a) Identify the important factors to consider when selecting a citrus orchard site [6]
(b) Describe an integrated pest management (IPM) strategy for fruit flies in tropical fruits [8]
(c) Propose value addition approaches for mango to improve mango adoption and production [6]

Section D: Tropical nuts [Answer at least one (1) question from this section]

6. (a) Describe the botany of cashew nuts [8]
(b) Outline the potential for cashew nut production in Zimbabwe [12]
7. (a) Describe the soil and climatic requirements for macadamia nuts [12]
(b) State and explain the three harvesting options for macadamia nut [6]
(c) Suggest any two (2) uses of macadamia nuts [2]

End of the Examination