

GWANDA STATE UNIVERSITY



FACULTY OF LIFE SCIENCES

DEPARTMENT OF CROP SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE IN CROP SCIENCE

Agronomy of Plantation Crops

LCS2210

Second Semester Final Examination Paper

Jan/Feb 2021

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 two (2) Sections (A and B) and seven (7) Questions
2. Answer **all** questions from **Section A** and any **four** questions from **Section B**.
3. Start each question on a new page

MARK ALLOCATION

QUESTION	MARKS
SECTION A	20
SECTION B	80
TOTAL ATTAINABLE MARKS	100

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Section A: Answer all questions [20 Marks]

1. (a) Copy and complete the following table [10]

Common name	Scientific name	Family	Origin	Major use(s)
Sugar cane	.....	.....	.....	Biofuel; electricity generation
Coffee	.....	.....	.....	.....
.....	<i>Camelia sinensis</i>	.....	.....	.....
.....	<i>Musa cavendish</i>	.....	.....	.....
Jatropha	.....	Euphorbiaceae	Mexico	.....
Macademia nuts	.....	Proteaceae	.....	.....

- (b) For a named plantation crop in each category below, discuss fertilizer and nutrition management [5]
- i. Beverage crop [5]
 - ii. Biofuel crop [5]

Section B: Answer any four (4) questions [80 Marks]

2. (a) Write short notes on the following cultural practices in banana production [12]
- i. De-suckering
 - ii. De-flowering
 - iii. Bunch covering
 - iv. Propping
- (b) What are the main challenges faced by banana producers [8]
3. (a) Compare and contrast the following practices in tea production
- i. Generative propagation and vegetative propagation [5]
 - ii. Formative pruning and productivity pruning [5]
- (b) Write an account on the biology and management of camellia dieback diseases of tea [10]
4. (a) List and discuss any five (5) factors considered when selecting a coffee nursery site [10]
- (b) Write an account on the biology and management of coffee leaf rust [10]

5. (a) Describe sugarcane propagation as practiced in the South East Lowveld of Zimbabwe [10]
- (b) Outline the process of sugarcane ripening, including details of the different types of sugarcane ripening [10]
6. Write short notes on macademia nuts production under the following subheadings
- (a) Soil requirements [6]
- (b) Nursery establishment and management [6]
- (c) Orchard establishment [4]
- (d) Pruning [4]
7. (a) List any four (4) insect pests of jatropha and describe the damage caused by each pest [8]
- (b) Discuss the potential of jatropha as an industrial crop in Zimbabwe [12]

End of the Examination Paper
