



GWANDA STATE UNIVERSITY
FACULTY OF LIFE SCIENCES
DEPARTMENT OF CROP SCIENCE
BACHELOR OF SCIENCE (HONOURS) DEGREE IN CROP SCIENCE
LCS 4115 CROP PRODUCT PROCESSING
FIRST SEMESTER EXAMINATION
SEPTEMBER 2023

This examination paper consists of 3 pages

Time Allowed: 3 hours
Total Marks: 100
Special Requirements: None
Examiner's Name: Mr J. Dube

INSTRUCTIONS

- 1 Answer **all** questions in Section A
- 2 Answer **only three** questions in Section B

MARK ALLOCATION

QUESTION	MARKS
SECTION A	40
SECTION B	60
TOTAL ATTAINABLE MARKS	100

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SECTION A: ANSWER ALL QUESTIONS IN SECTION A

1. Elaborate on the following terms as used in crop product processing:
 - a) Crop product preservation (3)
 - b) Extrusion (3)
 - c) Wet milling (3)
 - d) Freezing (3)
 - e) Nixtamalization (3)

- 2 Describe the importance of crop processing and preservation of agricultural products (16).

- 3 a) Outline any 3 cooling methods for maintenance of fresh quality in agricultural produce (9)

SECTION B: ANSWER ANY THREE QUESTIONS IN THIS SECTION

- 4 a) Discuss any two techniques used in cereal grain fortification citing advantages of each approach (10)
- b) Outline five steps followed in cassava flour production. (10)

- 5 Discuss the contribution of internal and external factors to post harvest losses citing measures for adoption in order to reduce such losses (20)

- 6 Discuss the following crop preservation methods:
- a) Drying in vegetables (5)
 - b) Salting (5)
 - c) Freezing (5)
 - d) Fermentation (5)
- 7 a) With the help a flow chart, describe the procedures involved in wheat milling (10)
- b) Briefly describe blanching in vegetables and its benefits (10)

END OF EXAMINATION PAPER