



FACULTY	AGRICULTURE, ENGINEERING AND NATURAL SCIENCES		
SCHOOL	AGRICULTURE AND FISHERIES SCIENCES		
DEPARTMENT	FOOD SCIENCE AND SYSTEMS		
SUBJECT	CEREAL SCIENCE AND TECHNOLOGY		
SUBJECT CODE	AFST 3882		
DATE	NOVEMBER 2024		
DURATION	3 HOURS	MARKS	100

First Opportunity Examination

Examiner: Dr. S.C. Barrion

Internal Moderator: Mr. S. Emvula

External Moderator: Dr. P.J. Williams

This question paper consists of **one (1)** page excluding this front page.

Instructions

- **Answer all five (5) questions**

QUESTION 1

- a) Eagle lager is made from pearl millet in Namibia. Describe the processing of this type of beer. [10]
- b) Describe the typical milling operations for oats and rice. [10]

QUESTION 2

- a) An entrepreneur has hired you to formulate a standard loaf of bread. Recommend five (5) ingredients that should be in the formulation and explain the function of each. [10]
- b) Millers perform various tests to ensure the standardisation of the quality of flour produced. Discuss any three (3) instrumentation specifically used to measure flour quality specifically for its dough development properties. [10]

QUESTION 3

- a) The inmates at a correctional facility in Tsumeb grow wheat. Advise a typical wheat milling process that may be used for flour production. [10]
- b) Spaghetti is an Italian and Ramen is a Japanese food. Differentiate the unit operations involved in the processing of these two (2) foods. [10]

QUESTION 4

- a) The Agro-Marketing and Trade Agency's (AMTA) has approached you to manage the storage of their cereal grain stock in silos and bags. Discuss. [10]
- b) Differentiate the manufacturing processes used for Corn flakes and Rice Krispies. [10]

QUESTION 5

- a) Similarities in the structure and morphology of cereal grain exist. Discuss this statement with emphasis on the components and their contribution to the nutritional composition of grain. [10]
- b) Differentiate between the milling processes for Maizena corn starch and Top score maize meal. [10]

END OF THE EXAMINATION