

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

THIRD YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF  
SCIENCE IN FOOD SCIENCE TECHNOLOGY

FOST 341: CEREALS AND ROOT TECHNOLOGY

STREAMS: BSc, FOOD SCIENCE & TECH Y2S1

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 5/12/2018

2.30 P.M - 4.30 P.M.

INSTRUCTIONS:

- Answer ALL Questions in Section A and any other Two Questions in Section B
- Do not write anything on the question paper

SECTION A: [30 MARKS]

- (a) Differentiate between true-cereals and pseudo-cereals and state examples in each category. [4 Marks]
- (b) Explain factors affecting quality of dry cereals and their product. [4 Marks]

QUESTION TWO

- (a) Explain the changes that occur in rice during parboiling and state three advantages of parboiling. [6 Marks]
- (b) Explain the reasons why barley is the most preferred grain in beer production. [3 Marks]

QUESTION THREE

- (a) Briefly describe various post-harvest techniques for roots and tubers. [4 Marks]
- (b) Explain four factors to consider when selecting flour type for bakery purposes. [4 Marks]

QUESTION FOUR

- (a) Explain factors that may affect nutritional composition of cereals. [3 Marks]
- (b) Name various products generated when wheat is wet milled and their uses. [2 Marks]

**SECTION B: [40 MARKS]**

**QUESTION FIVE**

- (a) Using wheat grain as a reference, discuss wet processing and application of the major products. [15 Marks]
- (b) Briefly explain the importance of wheat conditioning and how it is carried out during dry milling. [5 Marks]

**QUESTION SIX**

- (a) With illustrations, discuss the importance and applications of cereals and root tubers in the current world. [15 Marks]
- (b) Explain five factors that affect keeping quality of cereals and root during storage. [5 Marks]

**QUESTION SEVEN**

- (a) With the help of a schematic diagram, discuss rice milling to produce whole rice, bran and medium/small broken chips. [12 Marks]
- (b) Describe the processing of fermented drink from raw cassava and precautions to be followed. [8 Marks]

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