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# KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS  
2021/2022 ACADEMIC YEAR

FOURTH YEAR SECOND SEMESTER  
SPECIAL / SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE OF

COURSE CODE: AEN 422

COURSE TITLE: TECHNOLOGICAL APPLICATION IN AGRICULTURAL PROCESSING

DURATION: 2 HOURS

DATE: 25<sup>TH</sup> NOVEMBER 2022

TIME: 2 – 4 PM

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## INSTRUCTIONS TO CANDIDATES

- (i) Answer **Question 1 (Compulsory)** and any other **TWO** questions

This paper consists of **3** printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

### QUESTION ONE (30MARKS)

- a) State three reasons for food preservation (3 marks)
- b) Highlight two types of a packing house facility (2 marks)
- c) Distinguish between the ultra-heat treatment and pasteurization in milk processing (4 marks)
- d) Highlight three areas that should be avoided during siting of a packing house facility. (3 marks)
- e) Outline five benefits of preserving food using heat methods (5 marks)
- f) State four types of losses that can be experienced in agricultural production as a results of poor handling of agricultural produce (4 marks)
- g) List any five requirements of a good packing house facility.(5 marks)
- a. Explain four ways in which blanching facilitates food preservation. (4 marks)

### QUESTION TWO (20 MARKS)

- a. Discuss chemical methods of food preservation (10 marks)
- b. Explain FIVE factors considered before preservation of food substances (10 marks)

### QUESTION THREE (20 MARKS)

- a. Discuss the pre and post-harvest factors that affect quality in post-harvest shelf life of fruits and vegetables (10 marks)
- b. Describe five key operations in a packing house (10 marks).

### QUESTION FOUR (20 MARKS)

- a. The stage of maturity at which a fruit or vegetable should be harvested is important for its subsequent quality, storage and marketable life. Discuss FIVE physical qualities that can be used to determine the maturity of fruits and vegetables. (10 Marks)
- b. Explain five methods of drying food substances during preservation (10 marks)

**QUESTION FIVE (20 MARKS)**

- a. Discuss Factors to consider when siting of packing house facility **(10 marks)**
- b. Grading is an important operation in the packing house. Explain properties of food substances considered during grading **(10 marks)**