



MACHAKOS UNIVERSITY

University Examinations for 2016/2017 Academic Year

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

**FOURTH YEAR, FIRST SEMESTER EXAMINATION FOR BACHELOR OF
AGRICULTURAL EDUCATION AND EXTENSION**

KST 401: POST HARVEST TECHNOLOGY

Date:

Time:

EXAM PAPER

Instructions

Instructions: Answer ALL questions in section A and ANY TWO questions in section B

Section A: 30 MARKS

Question 1:

- (a) Explain SIX reasons of importance of food security in Kenya (**6 marks**)
- (b) Describe and explain FIVE pre-harvest factors which lead to food products spoilage (**5 marks**)
- (c) Explain importance of post-harvest physiology of agriculture products in packaging for the market (**7 marks**)
- (d) Explain THREE causes of post-harvest loss of most crop products (**6 marks**)
- (e) Explain the meaning and importance of senescence delaying techniques in crop product post-handling of export products (**6 marks**)

SECTION B: 40 MARKS

Question 2:

- (a) Explain briefly SIX non-chemical methods of controlling post-harvest spoilage in crop products (**12 marks**).

- (b) Describe FOUR reasons for cleaning and sorting of newly harvested produce (**8 marks**)

Question 3:

- (a) State and explain FIVE procedures of preparing fruit and vegetable produce for market (**10 marks**)

- (b) Explain FIVE grain products and indicate their equilibrium moisture content (%) levels required to deter spoilage (**10 marks**)

Question 4:

- (a) Explain physiological disorder prevention and management on crop produce (**10 marks**).

- (b) Explain the THREE major causes of spoilage of banana fruit (**3 marks**)
- (c) Explain SEVEN techniques of preventing spoilage of onion for export market (**7 marks**)

Question 5:

- (a) With the help of a graph (s) distinguish between climacteric and non-climacteric fruits (**6 marks**)

- (b) For each of the SEVEN crops indicated in the table below state the product and the post-harvest handling technique farmers carry out before delivery of produce to market (a) (**14 marks**)

Crop type	product	Post-harvest handling before marketing
1. Sisal		
2. Orange		
3. Ground nuts		
4. Tea		
5. Sorghum		
6. Mango		
7. Cabbage		