



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
FOOD SECURITY**

3ND YEAR 2ND SEMESTER 2016/2017 ACADEMIC YEAR

REGULAR

COURSE CODE: AHT 3324

COURSE TITLE: POSTHARVEST TECHNOLOGY AND PHYSIOLOGY

EXAM VENUE: STREAM: BSc. (Food Security)

DATE: EXAM SESSION:

TIME:

Instructions:

- 1. Answer ALL questions in section A and ANY other 2 Questions in section B.**
- 2. Candidates are advised not to write on question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

SECTION A (30 MARKS)

Answer ALL questions in this section

1. Define the term postharvest physiology. (5marks)
2. Briefly explain the following:
 - a). Importance of water supply in cut flowers. (4marks)
 - b). Why rain-water is preferred for postharvest solutions in cut flowers. (4marks)
3. Briefly explain the importance of sanitation in post-harvest handling. (4marks).
4. State the quantity of ethylene, that can significantly elicit the respiration and senescence processes of a number of harvested fruits and vegetables. (2marks)
5. Explain what other effect micro-organisms (bacteria and fungi) have additional to consumption of small amount of the food in post harvest chain. (4marks)
6. What is the scientific name of the mycotoxin aflatoxin? (4marks)
7. Briefly explain the effect psychological orientation can have on demand for food thereby affect post harvest loss. (3marks)

SECTION B: (40 MARKS)

Answer ANY TWO questions from this section

1. a). Explain the sites of losses in post harvest technology. (8marks)
 - b). Giving examples, distinguish between climacteric and non-climacteric fruits. (4marks)
 - c). What is the significance of respiration in post harvest handling?. (6marks)
2. a). Explain the importance of ethylene in the horticulture post-harvest chain. (10marks)
 - b). Discuss the factors affecting post harvest quality in flowers. (10marks)
3. a). State the goals of post harvest handling. (3marks)
 - b). Explain how the causes of spoilage, the rate at which spoilage occurs, the degree of spoilage, and the actions needed to reduce spoilage are substantially different in horticultural crops than for the cereals and oil seeds. (12marks)
 - c). State three factors responsible for most of the losses in perishable crops. (5marks)