



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**THIRD YEAR FIRST SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE
OF BACHELOR OF SCIENCE IN HORTICULTURE**

2016/2017 ACADEMIC YEAR

REGULAR

COURSE CODE: AHT 3411

COURSE TITLE: ORGANIC PRODUCTION AND COMPOSTING TECHNOLOGY

EXAM VENUE:LR 4

STREAM: BSc. (Horticulture)

DATE:16/12/16

EXAM SESSION: 9.00- 11.00 AM

TIME: 2 HOURS

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 from this Section.

1. Define the following terms with examples:
 - a. Sustainable Agriculture (2 Marks)
 - b. Conventional agriculture (2 Marks)
 - c. Organic farming (2 Marks)

2. Differentiate between the following
 - a. Compost and humus (2 Marks)
 - b. Synthetic and organic pesticides (2 Marks)
 - c. Mixed cropping and relay cropping (2 Marks)

3. Explain the following compost making techniques
 - a. Materials necessary for compost making (3 Marks)
 - b. The importance of good air/moisture balance in compost (3 Marks)
 - c. The significance of compost temperature (3 Marks)

4. Discuss the following organic production systems
 - a. Vermicomposting (3 Marks)
 - b. Preparation of enriched compost (3 Marks)
 - a. Humification of compost (3 Marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

5. Sustainability is a major principle of organic production. Discuss the three dimensions of sustainability in organic production as follows:

(20 Marks)

 - a. Social sustainability
 - b. Environmental sustainability
 - c. Economic sustainability

6. Good Agricultural Practices (GAPs) is defined as doing things well and guaranteeing it is done so.

(20 Marks)

 - a. Describe the concept of GAPs
 - b. Outline the practices fostered by GAPs
 - c. Explain how GAPs can be implemented in Kenya

7. Organic certification is a mandatory process for producers of organic food products.

(20 Marks)

 - a. Discuss why certification and product labeling is necessary in organic farming
 - b. List and describe the activities involved in the certification process
 - c. As an organic production manager, how would you ensure compliance with organic certification requirements