



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 3311

COURSE TITLE: VEGETABLE CROPS 1

EXAM VENUE: LR 5

STREAM: BSc. (Horticulture)

DATE: 20/12/16

EXAM SESSION: 2.00- 4.00 PM

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. Olericulture (2 Marks)
 - b. Root vegetables (2 Marks)
 - c. Botanical classification of vegetables (2 Marks)

2. Differentiate between the following
 - a. Broccoli and Brussel sprouts (2 Marks)
 - b. Determinate and indeterminate tomato cultivars (2 Marks)
 - c. Water melon and cucumber (2 Marks)

3. Explain the following vegetable production techniques
 - a. Training/trellising (3 Marks)
 - b. Seed inoculation (3 Marks)
 - c. Hardening (3 Marks)

4. Discuss the following vegetable production system:
 - a. Vertical cultivation (3 Marks)
 - b. Nutrition gardens (3 Marks)
 - c. Hydroponics (3 Marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

5. Many important vegetable crops have been genetically engineered over the past one decade to confer agronomically valuable traits. Discuss these developments under the following topics: (20 Marks)
 - a. Seed production,
 - b. Nitrogen assimilation,
 - c. Pest resistance and
 - d. Ethylene synthesis.

6. Vegetables can either be grown in the field or greenhouse. Explain the commercial production of:
 - a) Tomatoes in a greenhouse (10 Marks)
 - b) Cabbage in the open field (10 Marks)

7. Discuss the role of vegetables in nutrition and health under the following topics: (20 Marks)
 - a. Nutritional value of given vegetables.
 - b. Effect of postharvest handling on nutrient value.
 - c. Effect of cooking method on nutrient value.
 - d. Effect of production system on nutrient value.