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**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND  
TECHNOLOGY  
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES  
FOURTH YEAR FIRST SEMESTER UNIVERSITY EXAMINATION FOR  
THE DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE  
4<sup>TH</sup> YEAR 1<sup>ST</sup> SEMESTER 2017/2018 ACADEMIC YEAR  
REGULAR**

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**COURSE CODE: AHT 3411**

**COURSE TITLE: ORGANIC PRODUCTION AND COMPOSTING  
TECHNOLOGY**

**EXAM VENUE: LR 7**

**STREAM: BSc. (Horticulture)**

**DATE: 18/12/17**

**EXAM SESSION: 9.00 – 11.00 AM**

**TIME: 2 HOURS**

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**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:
  - a. GAP Auditing (2 Marks)
  - b. Organic farming (2 Marks)
  - c. Composting (2 Marks)
2. Differentiate between the following
  - a. Certification and accreditation (2 Marks)
  - b. Organic matter and humus (2 Marks)
3. Explain the advantages of organic farming technology over conventional agriculture (6mks)
4. Describe the functions of a GAP certification body (5mks)
5. Discuss the following as used in organic farming:
  - a. Chemical hazards (3 Marks)
  - b. Biological hazards (3 Marks)
  - d. Microbial antagonism (3 Marks)

**SECTION B [40 MARKS]**

**Answer ANY TWO questions from this Section.**

5. Discuss GAP standards based on: (20 Marks)
  - a. Food safety,
  - b. Environmental management,
  - c. Workers health, safety, and welfare
  - d. Produce quality.
6. Discuss the principles and practices of organic farming technology (20 Marks).
7. Discuss the requirements for vermicomposting based on the following: (20Marks).
  - a. Bedding materials.
  - b. Moisture content.
  - c. pH
  - d. Selection of worm species
8. Discuss the benefits of GAP implementation and certification (20mks)