

# UGANDA MARTYRS UNIVERSITY

## FACULTY OF AGRICULTURE

BACHELOR OF SCIENCE AGRICULTURE (DL) YEAR 1- 2021/2022

MODULE BSAG 1208: SUSTAINABLE CROP PRODUCTION

MODULE BSEOA 2110: ORGANIC CROP PRODUCTION SYSTEMS

DATE: 9TH AUGUST 2022, TIME: 9:30 AM – 12:30 PM

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### Instructions:

- Question **ONE** is **Compulsory**
  - Attempt any **other THREE (3)** questions
  - Start every question on a **new page**
  - Do not write on the question paper
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### Question 1: (40 marks) Compulsory

Sustainability is defined as “the ability to maintain or support a process over time”. The Brundtland Blueprint for attaining sustainability published in 1987 states that attaining sustainability involves “meeting the needs of the present generations without compromising the ability of the future generations to meet their own needs”. It is also generally accepted that sustainability stands on three Core Pillars.

- a) Name the **three core pillars** on which sustainability stands and briefly explain how each one of those core pillars currently affects crop production in your home area. (10 marks)
- b) Explain clearly why both **non- commercial** (subsistence) **crop production** and **commercial crop production** systems are considered unsustainable. (15 marks)
- c) What, in your opinion, are the **main obstacles to general acceptance and adoption** of sustainable crop production in Uganda or your home country? (15 marks)

### Question 2

Discuss the **key differences** between

- i) **Sustainable crop production** and **subsistence crop production**
- (ii) **commercial crop production** and **organic crop production**. (20 marks)

### Question 3

**A fertile soil (for plants) is like a balanced diet for animals.** It provides all the required nutrients of a plant in the right proportions; and this should be done sustainably throughout the growth cycle of the plant. Expound this statement. **(20 marks)**

#### **Question 4**

Last week you visited a maize trial at the Faculty of Agriculture in which, the B. Agriculture (Full Time) students are comparing conventionally row-planted maize with a “**five maize hole**” cropping system.

- a) Discuss what you saw, heard, and learnt from this on-going study? **(15 marks)**
- b) Based on what you saw, what conclusion can you make on this study as a sustainable crop production practice? **(5 marks)**

#### **Question 5**

A group of 50 small holder farmers in the place where you work comes to you for advice on the **advantages** and **benefits** of sustainable crop production and on **how they can start engaging in sustainable crop production on their farms.**

Write a clear presentation that addresses these small holder farmers' stated needs. **(20 marks)**

#### **Question 6**

Using clear examples, explain why the following practices are very important for sustainable crop production: **(20 marks)**

- (i) Timely planting
- (ii) Proper spacing / plant density
- (iii) Timely weeding
- (iv) Regular field scouting, and
- (v) Timely harvesting.

#### **Question 7**

Discuss the main guiding philosophy and principles of organic pest and disease management. **(20 marks)**

#### **Question 8**

“Long storage of harvested crops should be avoided as much as possible since tropical conditions are conducive for produce quality deterioration and pest attack”.

Discuss those tropical conditions that favour fast quality deterioration and pest attack of harvested farm produce. **(20 marks)**

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