



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**SECOND YEAR FIRST SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE
OF BACHELOR OF SCIENCE IN AGRIBUSINESS MANAGEMENT, BACHELOR OF
SCIENCE IN FOOD SECURITY AND BACHELOR OF SCIENCE IN SOIL SCIENCE**

2018/2019 ACADEMIC YEAR

REGULAR

COURSE CODE: AAE 3212 & AFB 3212

COURSE TITLE: BIODIVERSITY AND AGRICULTURAL BIOTECHNOLOGY

EXAM VENUE: **STREAMS: BSc. Agribusiness (Y₂S₁), BSc. Food
Security (Y₂S₁) & BSc. Soil Science
(Y₂S₁)**

DATE: **EXAM SESSION:**

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 **(10 Marks)**
 - a. Ecosystem
 - b. Biodiversity
 - c. Bioprospecting
 - d. Biotechnology
 - e. Agrobiodiversity
2. Discuss the economic role of biodiversity **(10 Marks)**
3. Write short notes on ecological pyramids **(6 Marks)**
4. With examples, differentiate between *in-situ* and *ex-situ* biodiversity conservation **(4 Marks)**

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

5. With the aid of a diagram describe the process of decomposition **(20 Marks)**
6. Discuss the possible health and ecological risks associated with the use of transgenic crops in agriculture **(20 Marks)**
7. Discuss how the following factors put pressure on biodiversity **(20 Marks)**
 - a. Climate change
 - b. Invasive species
 - c. Pollution
 - d. Overexploitation
 - e. Deforestation