



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**SECOND YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE
DEGREE OF BACHELOR OF SCIENCE IN FOOD SECURITY**

2021/2022 ACADEMIC YEAR

REGULAR

COURSE CODE: APT 3214/AHT 3211

COURSE TITLE: Plant Genetic Resources and Conservation

EXAM VENUE:

STREAM: BSc. Food Security

DATE:

EXAM SESSION:

TIME: 2 HOURS

Instructions:

1. Answer ALL the questions in section A and any TWO 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.
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SECTION A [30 MARKS]

Answer ALL questions from this Section.

1. a. Define Biological Conservation. (1 mark)
- b. Highlight the three objectives of United Nations Convention on Biological Conservation. (3 marks)
- c. The United Nations Convention on Biological Diversity (UNCBD) is a legally binding treaty, state three of every country obligation under UNCBD. (3 marks)
- d. What are the changes that have occurred in increasing use of Plant Genetic Resource for Food and Agriculture in order to meet the needs of a population that is projected to grow by some 40% over the period from 2005 to 2050? (3 marks)
2. a. State major seed banks for agricultural plants and the five categories of plant genetic resources (5 marks)
- b. State five principles that should guide our efforts in maximizing the diversity of our plant genetic resources. (5 marks)
3. a. Sustainable use of Plant Genetic Resource for Food and Agriculture (PGRFA) can only be realized through full coordination between crop research and effective seed systems. State clearly what needs to be done to realize this? (5 marks)
- b. As with many other crop plants, the genetic resources can be divided into five categories: state and briefly explain them (5 marks)

SECTION B [40 MARKS]

Answer any TWO QUESTIONS from this Section.

- Q3. Discuss the main methods and techniques of plant genetic resource conservation (20 marks).
- Q4. The causes to plant genetic resources loss in Africa are many and complex. Discuss (20 marks)
- Q5. Discuss constraints to development of policy and legislative measures and emerging policy and institution recommendations on plant genetic resource conservation and utilization in Africa (20 marks)

