

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 FOOD SECURITY**

2023/2024 ACADEMIC YEAR

REGULAR

COURSE CODE: APB 9301

COURSE TITLE: LAND USE AND FOOD SECURITY

EXAM VENUE: **STREAM: BSc. (Food Security)**

DATE: **EXAM SESSION:**

TIME: 2 HOURS

Instructions:

Answer ALL questions in section A and ANY other 2 Questions in section B.

Candidates are advised not to write on question paper.

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.

Define the following terms:

Land use system	(2 Marks)
Food security	(2 Marks)
Ecosystem services	(2 Marks)
Demography	(2 Marks)
Biodiversity	(2 Marks)

Explain the following functions of the ecosystem

Provisioning services (2 Marks)

Regulating services (2 Marks)

Supporting services (2 Marks)

Explain how the following factors would influence land use and food security

Urbanization (2Marks)

Land fragmentation (2Marks)

Dietary Changes (2Marks)

Physical stability and support (2Marks)

Describe the effects of the following land use planning activities to productivity (6Marks)

Allocation of land resources

Agricultural zoning

Conservation and preservation

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

Discuss the importance of food security for global wellbeing (20 Marks)

Explain how environmental degradation can influence land use and food security (20 Marks)

a. State the importance of Mangrove forest (8 Marks)

b. Discuss 6 factors that can conserve or restore mangroves (12 Marks)