



**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 SOIL SCIENCE,
FOOD SECURITY AND AGRICULTURAL EDUCATION**

2016/2017 ACADEMIC YEAR

REGULAR

COURSE CODE: ALS 3213

COURSE TITLE: Soil survey, Classification and Land Evaluation

EXAM VENUE: STREAM: BSc. (Soil Science; Horticulture; AGED)

DATE: EXAM SESSION: April 2107

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 with examples:
 - a. Soil survey (2 Marks)
 - b. Mapping unit (2 Marks)

- c. Land (2 Marks)
2. Outline the three soil moisture regimes that are used in soil classification (6 Marks)
3. Describe the following kinds of soil surveys (10 Marks)
- a. Special purpose soil survey
 - b. General purpose soil survey
 - c. Free survey
 - d. Intensive survey
4. Describe four types of information that is included in land suitability evaluation (8 Marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

5. Discuss the five principles of soil survey (20 Marks)
6. Outline the major soil properties of the **ten** soil Orders according to the USDA classification (20 Marks)
7. Describe the following land suitability classes (20 Marks)
- a. Class S1: Highly Suitable
 - b. Class S2: Moderately Suitable
 - c. Class S3: Marginally Suitable
 - d. Class N1: Currently not suitable
 - e. Class N2: Permanently not suitable