



UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE

SECOND SEMESTER 2024/2025

[JANUARY - APRIL, 2025]

SOIL 220: SOIL SURVEY AND LAND USE PLANNING

STREAM: Y1 S2

TIME: 2 HOURS

DAY: WEDNESDAY, 12:00 - 2:00 P.M.

DATE: 16/04/2025

INSTRUCTIONS:

- 1. Do not write anything on this question paper.***
- 2. Answer question ONE (Compulsory) and any other TWO questions.***

QUESTION ONE (30 MARKS)

- a). Differentiate between the following terms (6 marks)
- Land capability land suitability orders.
 - Multiple land utilization type and compound land utilization type
 - Land characteristics and land quality
- b) Explain the importance of soil classification is done. (6 marks)
- c) Explain the categories used in land suitability classifications structure. (4 marks)
- d) i) Explain any four objectives of a soil survey. (4 marks)
ii) Outline the basic items common to all soil survey reports. (2 marks)
- e) Briefly describe one of the major world soil classification systems (3marks)
- f). Identify and briefly explain the pedological features in a soil profile (5 marks)

QUESTION TWO (20 MARKS)

Describe types of soil survey under the following categories

- a) Classification based on regularity of observation (6 marks)
- b) Classification based on the scale of mapping. (14 marks)

QUESTION THREE (20 MARKS)

- a) Explain the aims of land evaluation process. (8 marks)
- b) Explain the six basic principles that are fundamental to the approach and methods employed in land evaluation. (12 marks)

QUESTION FOUR (20 MARKS)

- a) Briefly discuss the foundations of remote sensing (5 marks)
- b) Land use decision makers need to take soil types into consideration. Discuss the merits of all soil drainage classes as they apply to:
- i) On-site septic systems
 - ii) Establishment of a tree farm
 - iii) Underground storage tanks
 - iv) Vegetable production
 - v) Construction of new recreation fields. (15 marks)