

**UNIVERSITY EXAMINATIONS****FIRST SEMESTER 2025/2026 ACADEMIC YEAR****THIRD YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE****ENSC 314: LAND USE SYSTEMS AND CLASSIFICATION*****STREAM: R******TIME: 2 HRS******DAY: MONDAY [11.30 – 13.30 P.M]******DATE: 02/02/2026*****THIS QUESTION PAPER CONSISTS OF TWO (2) PAGES****PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.**

INSTRUCTIONS

1. Answer question ONE and any other TWO questions
2. Sketch maps and diagrams should be used whenever necessary.
3. Do not write on your question paper

QUESTION ONE (30 MARKS)

- a) Write short notes on the following concepts:
- i) Land cover (2 Marks)
 - ii) Land use (2 Marks)
 - iii) Agro-ecological zone (2 Marks)
 - iv) Land capability classification (2 Marks)
 - v) Land use planning (2 Marks)
- b) Discuss the major objectives of land-use classification in Environmental studies (10 Marks)
- c) Explain **five** factors influencing land-use systems in developing countries (10 Marks)

QUESTION TWO (20 MARKS)

- a) Examine the significance of land-use planning in sustainable resource management (10 Marks)
- b) Outline the role of technological advancements in modern land-use systems (10 Marks)

QUESTION THREE (20 MARKS)

- a) Describe the key methods used in land-cover data collection (10 Marks)
- b) Discuss the challenges faced in classifying heterogeneous land-use types (10 Marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the impacts of population pressure on land-use patterns (10 Marks)
- b) Explain the importance of agro-climatic classification in agricultural productivity (10 Marks)

QUESTION FIVE (20 MARKS)

- a) Explain the contribution of GIS and remote sensing to land-use mapping (10 Marks)
- b) Discuss the environmental consequences of poor land-use practices in rural areas (10 Marks)