

NATIONAL UNIVERSITY OF LESOTHO

BSC & BA EXAMINATIONS

PG 3242: RANGE ECOLOGY

May 2023

Marks: 100

Time: 3 Hours

Instructions:

- **Answer ANY four (4) questions.**
- **Where appropriate, illustrate your answers with diagrams**

Question 1

Discuss five different economic values of the Rangelands. [25]

Question 2

Discuss five different types of the Rangelands. [25]

Question 3

Discuss five different causes of Rangeland degradation. [25]

Question 4

- (a) Write short notes on the following:
- (i) Biotic components of the ecosystem. (7)
 - (ii) Abiotic components of the ecosystem. (7)
- (b) With the aid of diagram, illustrate energy flow in the ecosystem. (5)
- (c) Explain why Tundra and Desert rangeland ecosystems are characterized by low species diversity. (6)
- [25]

Question 5

- (a) Explain how each of the following influences the spread of fire in the Rangelands.
- (i) Fuel size. (5)
 - (ii) Fuel spread. (5)
 - (iii) Fuel moisture. (5)
 - (iv) Fuel load. (5)
- (b) State five different types of fire belts. (5)
- [25]

Question 6

Discuss processes involved in the Nitrogen cycle. [25]