

**NATIONAL UNIVERSITY OF LESOTHO**  
**FACULTY OF AGRICULTURE**  
**DEPARTMENT OF ANIMAL SCIENCE**  
**B.Sc. AGRICULTURE (AGRIC EXTENSION & RANGE RESOURCES AND**  
**ECOLOGY MANAGEMENT)**  
**SECOND SEMESTER EXAMINATION**  
**REM2501: LESOTHO RANGELAND ECOSYSTEMS**

**JUNE 2023**

**MARKS: 100**

**TIME: 3:00HRS**

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**INSTRUCTIONS:**

Answer all questions.

Start every question on a new page.

Points should be bulleted.

### **Question 1**

- a) Define the following terms (2 marks each)
- Rangeland
  - Ecosystem
  - Savanna
  - Range condition
  - Decreaser
- b) Mention five characteristics of rangelands. (5 marks)
- c) What are the importances of rangeland plants? (5 marks)

### **Question 2**

- a) Describe energy flow in the ecosystem (14 marks)
- b) What are the effects of fire-grazing interaction on vegetation and wildlife? (6 marks)

### **Question 3**

- a) Describe how a rancher would identify important wild plants in Lesotho? (4 marks)
- b) Mention four agro-ecological ecosystems of Lesotho and their characteristics. (16 marks)

### **Question 4**

- a) Invasive plant species have become a threat to the natural biodiversity and ecosystem function. Yes, or no? Support your answer with five reasons. (5 marks)
- b) Discuss five plant characteristics that contribute to invasiveness. (15 marks)

### **Question 5**

Discuss five possible methods that can be employed to improve rangelands by a rancher. (20 marks)