

NATIONAL UNIVERSITY OF LESOTHO
FACULTY OF AGRICULTURE
DERPATMENT OF ANIMAL SCIENCE
SECOND SEMESTER EXAMINATION 2022/2023 SESSION
REM4504: RANGE FIRE MANAGEMENT

TIME: 3 HOURS

MARKS: 100

INSTRUCTIONS:

Answer all questions

Start every question on a new page.

Points should be bulleted

Question 1

- i. Outline and discuss fire characteristics. (10 marks)
- ii. Discuss the causes of fire on rangelands in detail. (10 marks)

Question 2

- i. Heat must be transferred from one fuel molecule to another for combustion to continue. Explain how this is done? (6 Marks)
- ii. Which fuel characteristics affect fire behaviour regardless of fuel type? (10 Marks)
- iii. Explain the rationale behind the use of fire as a control instrument on rangelands. (4 marks)

Question 3

- i. Inventory and monitoring have long been crucial components of rangeland management in order to aid in decision-making in accordance with the productive potential of the land resource, such as carrying capacity and usage levels. Outline four goals of the two listed above. (4 marks)
- ii. Describe any four range conditions indicators. (4 marks)
- iii. Animals can flee from fire, in contrast to vegetation. What safeguards do plants have against fire's effects? (12 marks)

Question 4

- i. Discuss Standard Fire Orders.(10 marks)
- ii. Outline and describe classes of fire and their specific control measures.(10 marks)

Question 5

- i. Show how prescribed burning affects rangeland resources.(4 marks)
- ii. Explain three methods of fire application in prescribed burning.(6 marks)
- iii. Prescribed burning may be used by land managers depending on their goals. Explain. (10 Marks)