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UNIVERSITY OF SWAZILAND

2nd SEM. 2014/2015

SUPPLEMENTARY EXAMINATION PAPER

**PROGRAMME:** B.Sc. ANIMAL SCIENCE YEAR 2
B.Sc. ANIMAL SCIENCE (DAIRY OPTION) YEAR 2

**COURSE CODE:** AS 205

**TITLE OF PAPER:** RANGE MANAGEMENT

**TIME ALLOWED:** TWO (2) HOURS

**INSTRUCTIONS:** ANSWER ANY FOUR (4) QUESTIONS

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR**

**QUESTION 1**

(a) Briefly discuss the four grazing management principles that must be followed by livestock farmers and mention which of this is the most important. (15 Marks)

(b) Outline five guidelines that could be followed by range managers to avoid plant poisoning to livestock. (10 Marks)

**QUESTION 2**

(a) In complete sentences, outline four characteristics that are associated with high grazing resistance in grasses. (10 Marks)

(b) The continuous grazing method is still popular among some ranchers. Discuss the concept, advantages and disadvantages of this grazing system. (15 Marks)

**QUESTION 3**

(b) Discuss other uses of rangelands under the following headlines:

(i) Crop production and plant products. (5 Marks)

(ii) Recreation and tourism. (12 Marks)

(iii) Site stabilisation. (8 Marks)

**QUESTION 4**

(a) Discuss range reseeding as one of the technologies you could adopt to restore degraded rangelands. (25 Marks)

**QUESTION 5**

(a) Define rangeland condition and rangeland monitoring. (5 Marks)

(b) Rangeland condition is important in determining carrying capacity. Suppose you go out and do range monitoring by species cover; you collect the following data:

Actual cover (%)

Thatch grass (Increaser I) 22; Guinea grass (Decreaser) 16; *Eragrostis plana* (Increaser I) 10; *Eragrostis curvula* (Decreaser) 13; Ratstail dropseed (Increaser I) 13, Bitter apple (Invader II) 5 and Milkweed (Invader II) 5.

Calculate rangeland condition based on cover of these species. (20 Marks)

Use the given format below; the second column gives you information on some of the species, that is, how much of it is allowed in climax condition.

| Species | Allowed in climax | Relative cover on site | Usable percent |
|---|---|---|---|
| Thatch grass | 20 | | |
| Guinea grass | 100 | | |
| *Eragrostis plana* | 5 | | |
| *Eragrostis curvula* | 100 | | |
| Ratstail dropseed | 10 | | |
| Bitter apple | | | |
| Milkweed | | | |
| **Range condition is** _____ | | | = |