

PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES
SCHOOL OF AGRICULTURE AND NATURAL RESOURCES SCIENCES
DEPARTMENT OF AGRICULTURAL SCIENCES AND AGRIBUSINESS

QUALIFICATION: BACHELOR OF SCIENCE IN AGRICULTURE	
QUALIFICATION CODE: BAGA	LEVEL: 7
COURSE CODE: RRG611S	COURSE NAME: RANGELAND REGENERATION
SESSION: JULY 2023	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

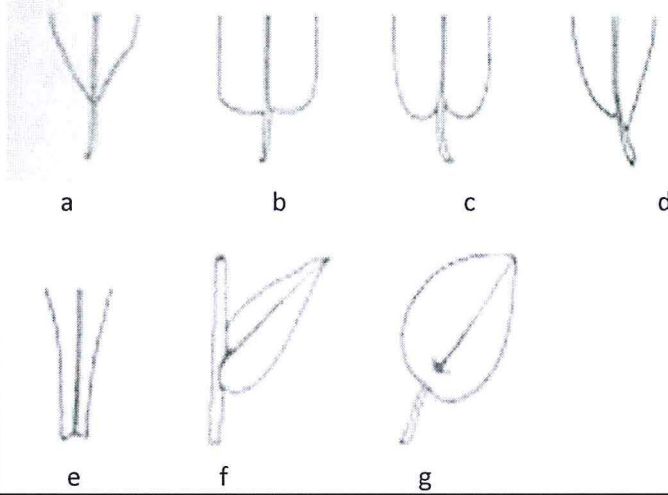
SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Dr Edgar Mowa
MODERATOR:	Dr Hilma Amwele

INSTRUCTIONS
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Examination question paper
2. Answering book

THIS QUESTION PAPER CONSISTS OF 3 PAGES (Including this front page)

1.	Define the following: (a) Decreaser species (b) Increaser II species (c) Benchmarks	(3)
2.	Label the leaf bases below (a-g): - 	[7]
3.	Discuss how a farmer in the Omaheke region can set-up a benchmark in his farm and how he will benefit from setting-up the said benchmark. Currently, his farm has 7000ha of rangeland but it fails to support 100 Large Stock Units from one rainfall season to the next.	[8]
4.	How do you determine if a leaf is simple or compound?	[4]
5.	Suppose that during a drought, and grass species A is still alive in both the benchmark and the surroundings, grass species B is found to have died in both the benchmark and the continuously grazed surroundings, grass species C is found to have died out in the surroundings but survived in the benchmark: a. Which species is resistant to continuous grazing? b. Which is likely to be a mesophyte? c. Which species is likely to be a palatable xerophyte? d. Which species is likely to be an unpalatable xerophyte? e. Which species would you collect seeds from to re-establish in the surrounding areas after the introduction of good grazing management?	[5]
6.	Name any 2 plant species with compound leaves and any 2 with simple leaves? (Scientific names only).	[4]
7.	Name any 2 plant species with paripinnate compound leaves and any 2 with imparipinnate compound leaves? (Scientific names only).	[4]
8.	Suppose a farmer with rangeland of 9000ha estimates at the end of the growing season that a representative square with sides of 45m is required by one LSUday and that the dry season will last for 250 days.	[10]
9.	Draw and fully label a flower and its parts; inferior vs superior.	[10]

10.	Suppose a rangeland of 12000ha yields an average of 70gDM/m ² . Using the objective method, calculate the number of Large Stock Unit (LSU) and Small Stock Unit (SSU) that the farmer should stock for that year?	[10]
	Differentiate between assumptions of the Subjective and Objective methods of grazing capacity estimations.	[10]
11.	Explain rangeland management that could cause cattle not to conceive.	[10]
12.	Suppose that monitoring by a farmer shows that, in order to prevent overgrazing, the maximum grazing period should not exceed 40 days while the minimum rest period should be at least 160 days.	[6]
13.	How can you combine herding and fencing to effectively benefit on your farm?	[4]
14.	Describe the main methods used for control of bush and weed encroachment.	[5]