



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF AGRICULTURE	
QUALIFICATION CODE: 07BAGR	LEVEL: 7
COURSE CODE: LRH610S	COURSE NAME: LARGE RUMINANT HUSBANDRY
SESSION: June 2019	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	DR. H.R. AMWELE
MODERATOR:	DR. E. LUTAAYA

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL questions.2. Read all questions carefully before answering.3. Number your answers clearly.4. Make sure your student number appears on the answering script.

PERMISSIBLE MATERIALS

1. Examination paper.
2. Examination script.

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

Question 1

Define the following terms and expected number of days during dairy management.

- A. Inter-calving period (2)
- B. Lactation period (2)
- C. Service period (2)
- D. Calving period (2)
- E. Gestation period (2)
- F. Dry period (2)
- G. Steaming up period (2)

[14]

Question 2

Explain the following terms and state the period of the oestrus cycle when they occur.

Proestrus (3)

Estrus (3)

[6]

Question 3

3.1 What are the signs of heat in a cow? (6)

3.2 What are the advantages of Artificial Insemination? (6)

[12]

Question 4

What are the estimated volume (litres) of what in the different compartments of the cattle stomach? (8)

Question 5

Match the four compartments of the ruminant stomach with their functions. (8)

Function	Four compartments of a stomach
In which part of the cattle stomach about 50 to 65 percent of starch and soluble sugar consumed is digested.	Omasum
The folds increase the surface area, which increases the area that absorbs nutrients from the feed and water.	Abomasum
It is home to a population of microorganisms (microbes or "rumen bugs") that include bacteria, protozoa, and fungi.	Rumen
Produces hydrochloric acid and digestive enzymes such as pepsin (breaks down proteins) and receives digestive enzymes secreted from the pancreas such as pancreatic lipase (breaks down fats).	Reticulum

Question 6
 Explain the meaning of testicle consistency scores 1, 2, 3, 4 and 5. (8)

Question 7
 Explain caustic paste dehorning methods. (6)

Question 8
 8.1 Give an example of nonsurgical castration. (2)
 8.2 What tools do you need when performing nonsurgical castration? (2)
 [4]

Question 9
 What organisms cause the following diseases? (12)

Diseases	Organism causes the diseases
Anthrax	a
Tuberculosis	b
Malignant oedema	c
Gallsickness	d
Heartwater	e
Nagana	f
Elephant skin disease	g
Coccidiosis	h
Corridor disease	k
Redwater	l
Coli bacillosis	m
Calf paratyphoid	n

Question 10
 What target organs are affected by the following toxic plants? (7)

Poisonous plants	Target organ
<i>Geigeria</i>	a
<i>Lantana camara</i>	b
<i>Dicapdi glaucum</i>	c
<i>Dicapethalum cymosum</i>	d
<i>Gratalaria</i>	e
<i>Amaranthus</i>	f
<i>Crotalaria burkeana</i>	b

Question 11
 11.1 What macro-minerals and micro-minerals are required for cattle growth and production? Give 3 examples for each. (6)
 11.2 Explain the functions of the following nutrients required for beef and dairy cattle. (9)

[15]
Total [100]



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DEPARTMENT OF NATURAL RESOURCES AND AGRICULTURE SCIENCES

QUALIFICATION: BACHELOR OF <i>AGRICULTURE</i> OFFICE MANAGEMENT AND TECHNOLOGY	
QUALIFICATION CODE: 27AGR	LEVEL: 7
COURSE CODE: LRH610S	COURSE NAME: Large Ruminant Husbandry
DATE: 28 May 2019	PAPER: Theory
DURATION: 3 Hours	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Dr. H. R. Amwele
MODERATOR:	Dr. E. Lutaaya

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL four (11) questions.2. Read all questions carefully before answering.3. Number your answers clearly.4. Make sure your student number appears on the answering script.

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2. Examination script.

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