



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH, APPLIED SCIENCES AND NATURAL RESOURCES

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF NATURAL RESOURCES MANAGEMENT	
QUALIFICATION CODE: 07BNTC	LEVEL: 7
COURSE CODE: ALS720S	COURSE NAME: ANIMAL STUDIES 3
DATE: NOVEMBER 2022	
DURATION: 3 HOURS	MARKS: 150

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Mrs. L Theron
MODERATOR:	Ms Miya Kabajani

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 4 PAGES (Excluding this front page)

**SECTION A
PATHOLOGY**

QUESTION 1

Explain the following terms: **[10]**

- 1.1 Haemorrhage (1)
- 1.2 Incubation (1)
- 1.3 Hemoglobinuria (2)
- 1.4 Colostrum (1)
- 1.5 Autopsy (1)
- 1.6 Osteophagia (2)
- 1.7 Acaricide (1)
- 1.8 Torticollis (1)

QUESTION 2

- 2.1 Distinguish between a “local infection” and a “systemic infection” and provide an example for each. (4)
 - 2.2 What is a “Latent” disease? (1)
 - 2.3 What is meant by the term “sub-clinical”. (1)
 - 2.4 Redwater is a protozoal disease transmitted through the bite of Rhipicephalus decoloratus. This particular tick is a “single host tick”. Explain what this means. (4)
- [10]**

QUESTION 3

- 3.1 Briefly explain why Rabies is a notifiable disease in Namibia. (5)
 - 3.2 What role does the circulatory system play in the distribution of the rabies virus through the body of an infected animal? (1)
 - 3.3 You are an Animal Health Technician in the Directorate of Veterinary Services, addressing a group of farmers. What advice would you give them on the control measures for Tuberculosis? (6)
- [12]**

QUESTION 4

- 4.1 What control measure can a farmer take to stop his animals from consuming toxic plants or other poisons? (5)
- 4.2 Which plant is listed in the 2007 Guinness Book of records as the most poisonous plant in the world? (1)
- 4.3 Although being very poisonous, the plant listed in 4.1 is often put to good use. Provide 3 uses thereof. (3)
- 4.4 What are the results (clinical signs) of Magnesium deficiency in game? (4)
- 4.5 Why is it important for game to have an adequate supply of copper in their diet? (2)

- 4.6 Name the part/system of the body affected by each of the following plants. (3)
- (a) *Nerium oleander*
 - (b) *Geigeria ornativa*
 - (c) *Nicotiana glauca*
- [18]

QUESTION 5

You are the owner of a game capture team. You have just been asked by a client to capture a group of sables in Karos (Etosha National Park) and to deliver them to his farm in Mpumalanga (RSA). What measures will you take to prevent any of these animals from getting Capture Myopathy? Begin your explanation right from the starting point – the planning phase – up to the point where you deliver the animals to the client.

[15]

SUB-TOTAL [65]

SECTION B DESERT ADAPTATIONS

QUESTION 6

- 6.1 Make use of examples to explain the difference between escape and retreat in desert adapted animals. (4)
- 6.2 Compared to the ground squirrel, the gemsbok is a relatively large animal. What are the advantages and disadvantages of this for the gemsbok? (6)
- [10]

QUESTION 7

- 7.1 Discuss 4 behavioural adaptations of camels that help them to survive in an arid environment. (8)
- 7.2 Discuss 4 anatomical adaptations that camels have to help them to survive in an arid environment. (8)
- [16]

QUESTION 8

Discuss various methods that desert birds use to cope with the extreme temperatures in the Namib Desert. Use proper explanatory sentences. [12]

QUESTION 9

Make use of suitable examples to explain how desert animals avoid and/or tolerate dehydration. Note: do not provide methods of water gain! [10]

QUESTION 10

After a good rainfall in the interior, the water might reach the Kuiseb river and temporary ponds will form. This provides a lifeline for a myriad of lifeforms. Discuss the conditions inside the pool as well as examples of various animal species that can be found in these pools. Make use of proper sentences!

[7]

SUB-TOTAL [55]

ENDEMISM IN NAMIBIA

QUESTION 11

- 11.1 Clearly differentiate between a true endemic and a near-endemic species (2)
- 11.2 Write a paragraph about Namibia's only endemic tortoise species. (4)
- 11.3 Give the scientific name of the nocturnal Namib Dune gecko and say why they glow under ultra-violet light. (2)
- 11.4 How can you tell the male and female Namibian rock agamas, *Agama planiceps*, that are common around Windhoek, apart? (2)
- 11.5 Give the scientific name of the Damara Tern and explain why it is considered to be a breeding endemic. (2)
- 11.6 Give the common Namibian endemic **ground squirrel**, and give **one** characteristics you as a tour guide in Etosha National Park can use to distinguish it from the similar-looking South African ground squirrel, that also occurs in Etosha. (2)
- 11.7 Name one of the **antelope** species or sub-species endemic to Namibia (1)

[15]

QUESTION 12

Choose **either** A or B

- A** As a trainer at NaDEET Environmental Education Centre you would like to teach your learners about the special animals found only in the dunes and inselbergs of the Southern Namib. Write a paragraph on each of the following **three** unique animals found there: Namibia's **only** truly endemic **bird**, **one** endemic or near-endemic **reptile** and **one** endemic or near-endemic **mammal**, found only in dune areas.

Give both the common and scientific names of each and describe what each looks like. Say if it is a true endemic or a near-endemic, give its distribution and its preferred habitat. Discuss how it is adapted to surviving in dunes. You may add other interesting facts too.

[15]

OR

- B** As the Environmental officer at the City of Windhoek, you have been asked to prepare a short report on interesting birds that tourists to the city are likely to see in and around Windhoek. Prepare an **essay** on **three** species of **near-endemic birds** found near Windhoek.
- In your Introduction describe why the area is a hot spot for endemism. Then write a paragraph on each species, give both their common and scientific names and mention the habitat it prefers and where it nests and give a special characteristic that **you** would use to identify it. Conclude with why we need to conserve our endemic birds and the threats they face around Windhoek.

[15]

SUB-TOTAL [30]

TOTAL [150]