



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES

Department of Agriculture and Natural Resources Sciences

QUALIFICATION: Bachelor of Natural Resource Management (Nature Conservation)	
QUALIFICATION CODE: 07BNTC	LEVEL: NQF Level 7
COURSE: Animal Studies 3	COURSE CODE: ALS720S
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DURATION: 3 Hours	MARKS: 150

SECONDARY OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER	
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MODERATOR:	Dr. A.L. Marais

**THIS QUESTION PAPER CONSISTS OF 4 PAGES
(EXCLUDING THIS FRONT PAGE)**

INSTRUCTIONS

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

PERMISSIBLE MATERIALS

1. Examination paper.
2. Examination script.

**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 distinguish between indigenous and endemic species. (2)
- 11.2 Name the endemic frog that has only been found in a wetland on the airfield at Rundu. (1)
- 11.3 Give both the common and scientific name of the near-endemic freshwater fish found in rainwater pools in the Zambezi region and explain where and why it is endangered. (4)
- 11.4 Give both the scientific and common name of the nocturnal, endemic gecko, known to lick its eyes, that is found on the dunes around the Gobabeb Research and Training Centre and say how they can be easily spotted at night. (3)
- 11.5 The removal of dead wood to use for firewood in and around Windhoek has caused a serious decline in the populations of two species of cavity-nesting, near-endemic hornbills. Give both the common and scientific names of these two species and give two characteristics that will help you to tell them apart. (6)
- 11.6 a) Give the common and scientific names of the near-endemic Namibian ground squirrel, that occurs in western Etosha . (2)
- b) Say which other, more widespread, ground squirrel it resembles and give the characteristic used to distinguish it from that squirrel. (2)

[20]

QUESTION 12

Choose **either A or B**

- A** Visitors to Namibia may find it difficult to tell the endemic antelope apart from other more widespread species that look similar. As a warden in Etosha National Park, you have been asked to prepare guidelines for tourists to help them identify **two** of the endemic mammals that they are **most likely** to see in the park (BUT – no rodents!).
- Write a paragraph on each of the **two** large mammals you select, giving both their common and scientific names, the habitat they prefer, and adding where in Etosha tourists are likely to see them. Say what other mammal each could be confused with and how one can easily tell them apart.

[10]

OR

- B** The north-western escarpment area of Namibia is known for its many endemic and near-endemic species. **Other than the hornbills**, choose **three**, near-endemic, bird species that occur there and write a paragraph on each giving either its common or scientific name, its main distinguishing features and its preferred habitat. Finally conclude with a sentence saying why the north-western escarpment supports so many near endemics.

[10]

SUB-TOTAL [30]

TOTAL [150]