



PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF NATURAL RESOURCES MANAGEMENT	
QUALIFICATION CODE: 07BNRS	LEVEL: 7
COURSE CODE: WMH620S	COURSE NAME: WILDLIFE MONITORING AND HANDLING
DATE: JANUARY 2023	
DURATION: 3 HOURS	MARKS: 150

SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Mr Jeremia K.L. Amutenya and Mrs Louise Theron
MODERATOR:	Mr Helmuth Tjikurunda

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 (Excluding this front page)

QUESTION 1

Write short notes to define or explain the following terms:

- 1.1 Road Strip Count (2)
 - 1.2 Capture myopathy (4)
 - 1.3 Transportation Crates (2)
 - 1.4 Quantitative data (2)
- [10]**

QUESTION 2

Explain the difference between the following pairs of terms.

- 2.1 Performed water vs. Metabolic water (2)
 - 2.2 Soft release vs. hard release. (2)
 - 2.3 Carrier vs Vector for a disease. (Give an example for each) (4)
 - 2.4 Botulism and phosphorous deficiency frequently occur together. Discuss this statement. (2)
- [10]**

QUESTION 3

- 3.1. Natural Resource Managers must determine various factors before designing and undertaking a monitoring program. **Name six** factors to consider when designing or undertaking a monitoring program for a National Park. (6)
- 3.2. Dr Eroid Naomab is keen on conducting a full moon waterhole game count on his new farm. **Explain** in detail to Dr Naomab how a full moon waterhole game count is conducted. (7)
- 3.3. Remote sensing is a tool being explored and utilised by Natural Resource Managers to ensure effective management of wildlife resources. **Expand on four** important roles that Remote Sensing (RS) plays in wildlife monitoring and management. (4)
- 3.4. You have been introduced to six elements of adaptive management in class. **Name and explain** these elements. (12)

[29]

QUESTION 4

- 4.1. **Name four (4)** different types of nets used to capture wild animals. (4)
- 4.2. Captured animals experience ongoing stress, and if that stress level exceeds their physical and physiological limits, they may eventually succumb to it. **Name seven** factors that worsen stress in wild animals to be captured. (7)

- 4.3. The mass capture boma consists of five different segments separated by plastic curtains which allow for animals to be herded towards the end of the boma, leading into a transport truck. **Name** these segments of a capture boma. (5)
- 4.4. **Provide five (5)** advantages of using chemical immobilization to capture wild animals. (5)
- 4.5. Capture myopathy occurs in three distinct phases, **name** these phases. (3)
- 4.6. **Provide eight (8)** symptoms of capture myopathy. (8)

[32]

QUESTION 5

- 5.1. **What are six (6)** factors to consider when constructing a holding facility/pans for wild animals? (6)
- 5.2. Water is one of the most vital nutrients for wild animals, because of the multiple functions it is used for. **Name and provide** an example of three sources where wild animals get their water from. (6)
- 5.3. Briefly discuss the digestive system of a rhino. (10)

[22]

QUESTION 6

- 6.1. You are appointed as a Chief Warden for the Game Capture Unit within the Ministry of Environment, Forestry and Tourism, part of your duty is to inspect and approve transport crates of game dealers. **Provide ten** criteria you will follow to inspect transport crates to ensure the welfare of the animal being transported. (10)
- 6.2. Under what conditions can you recommend wild animals to be offloaded at night, **name four** conditions. (4)
- 6.3. What are some of the factors that need to be considered before wild animals are to be offloaded from the transport crate, name eight factors. (8)

[22]

QUESTION 7

- 7.1. **Name** the pathogen responsible for each of the following diseases, and provide the scientific name. (5)
- 7.1.1. Anthrax

- 7.1.2. Tuberculosis
 - 7.1.3. Ngana
 - 7.1.4. Babesiosis
 - 7.1.5. Ringworm
- 7.2. Anthrax spores are very resilient and can survive in nature for a very long time. It is thus very difficult to eliminate/destroy them. Discuss various ways that these spores can spread through the environment before eventually entering the bodies of animals, causing Anthrax. **(Do NOT use bullet points!)** (5)
- 7.3. Give a short description of the disease Babesiosis. Explain what it is, how animals get it, immunity and resistance in cattle and how it can be treated. **NO clinical signs are required!** (10)
- 7.4. 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? (5)

[25]

TOTAL: 150 MARKS