



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH NATURAL RESOURCES AND APPLIED SCIENCES**

**DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES**

<b>QUALIFICATION: BACHELOR OF NATURAL RESOURCE MANAGEMENT (NATURE CONSERVATION)</b>	
<b>QUALIFICATION CODE: 07BNTC</b>	<b>LEVEL: 7</b>
<b>COURSE CODE: BCM721S</b>	<b>COURSE NAME: BIODIVERSITY CONSERVATION MANAGEMENT</b>
<b>DATE: NOVEMBER 2022</b>	
<b>DURATION: 3 HOURS</b>	<b>MARKS: 150</b>

<b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	Prof. Morgan Hauptfleisch
<b>MODERATOR:</b>	Dr. Mark Bilton

<b>INSTRUCTIONS</b>
<ol style="list-style-type: none"><li>1. Answer ALL the questions.</li><li>2. Write clearly and neatly.</li><li>3. Number the answers clearly.</li></ol>

**PERMISSIBLE MATERIALS**

1. Examination question paper
2. Answering book

**THIS PAPER CONSISTS OF 4 PAGES** (excluding this front page)

**Question 1:**

1.1 Discuss the value of scientific research for the management of natural resources in a national park.

(5)

1.2 You have been asked to scientifically investigate reasons for the disappearance of many species of birds from Parks in the Zambezi and Kavango East regions. Describe step by step (using recognized scientific method, and a schematic diagram) how you would investigate this problem. You must use the specific example of birds in Zambezi as part of your example.

(12)

1.3 How and to whom will you communicate the findings of your research?

(3)

[20]

**Question 2:**

2.1 Discuss the impact of rabies on livestock, wildlife and humans.

(8)

2.2 An experiment was recently conducted by Agra to investigate rabies in kudu. What did the experiment entail, and in your opinion argue if it was successful or not.

(7)

[15]

**Question 3:**

Management of parks, species or activities require similar but yet unique management strategies. Assess each of the management strategies below and decide how you will manage wildlife under each strategy, and why.

3.1 A small trophy hunting farm of 3 000 hectares in the central shrub and tree savanna of Namibia.

(6)

3.2 A multi-use conservation landscape, such as the Etosha South-West Landscape, which includes Etosha National Park, Etosha Heights Private Reserve, commercial farms and communal conservancies.

(12)

3.3 The overall management of elephants in Namibia.

(12)  
[30]

**Question 4: Climate Change**

4.1 Why must adaptation and mitigation proceed hand-in-hand?

(12)

4.2 Namibia emits little compared to developed countries. Why should we do anything to reduce GHG emissions?

(6)

4.3 What is one thing you or your community could realistically do to prepare for or adapt to future changes in climate and explain how or why your suggestion would work?

(7)  
[25]

**Question 5:**

A wildlife count for a privately owned game farm of 15 000 ha is provided below:

<u>Species</u>	<u>Number</u>	<u>GU equivalent</u>	<u>BU Equivalent</u>
Blesbok	134	0.4	0
Blue wildebeest	860	1	0
Black wildebeest	62	0.8	0
Common duiker	46	0	0.2
Giraffe	28	0	5.2
Impala	28	0.2	0.1
Red hartebeest	182	0.7	0
Roan	42	1.5	0
Sable	24	1.3	0
Waterbuck	342	1.3	0
Warthog	144	0.2	0.1
White rhino	8	5.4	0
Burchell's zebra	15	1.9	0

Assess the species composition, numbers of wildlife and types of herbivores to describe the following:

5.1 Species richness

(2)  
3

5.2 Suitability of the wildlife species for the area

(5)

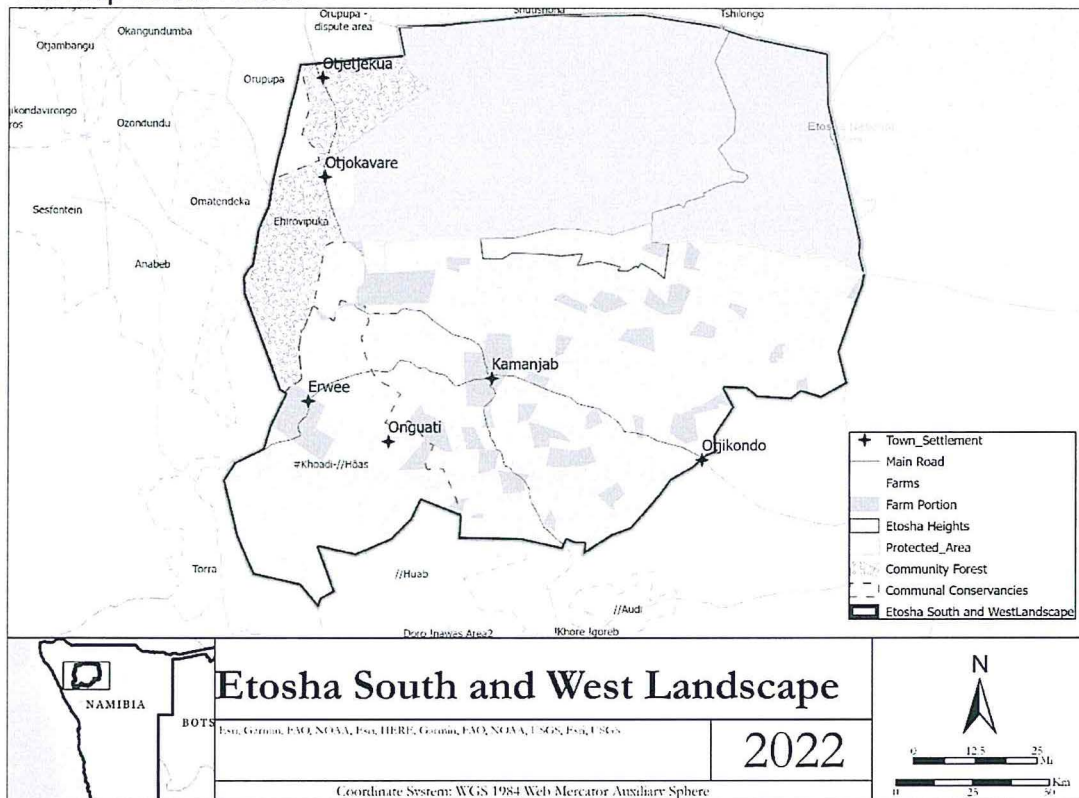
5.3 Stocking rates for graze and browse

(20)

[27]

**Question 5: Landscape Conservation**

The map below refers:



5.1 What is landscape conservation?

(5)

5.2 Why does Namibia promote this management type?

(8)

5.3 Critically evaluate and debate how you could agree and disagree with the statement below:

“Commercial farms, communal conservancies and national parks in the Etosha South and

West Landscape have very different goals and management methods. **These are too different** and will **not** allow for complete conservation of the area. There must be strong electric fences which separate these land uses and commercial farmers must be left in peace to make money. It will solve many of the problems.”

Make sure that you consider carefully the land-use types (farms, protected areas, communal conservancies and private reserves) and the problems which occur in the landscape. The problems include lions escaping from Etosha National Park, elephants which move from the communal conservancies in the west onto commercial farms, a prolonged drought in the area, fires from charcoal production, poaching of rhinos).

(20)

[33]

**Total: 150**