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:** 7
COURSE CODE: NRM720S	**COURSE NAME:** NATURAL RESOURCE MANAGEMENT 2
SESSION: NOVEMBER 2019	**PAPER:** THEORY
DURATION: 3 HOURS	**MARKS:** 150

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	DR MORGAN HAUPTFLEISCH
MODERATOR:	DR. MARK BILTON

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

PERMISSIBLE MATERIALS

1. All written work MUST be done in blue or black ink
2. No books, notes and other additional aids are allowed

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

Question 1: Terms and definitions

Provide a concise definition as well as <u>one</u> example for the following terms:

1.1 Species richness

(3)

1.2 Population size

(3)

1.3 Grazing capacity

(3)

1.4 Browse unit

(3)

1.5 Economic driver of wildlife prices

(3)

1.6 Climate change adaptation

(3)

1.7 Landscape conservation

(3)

1.8 Passive management

(3)

1.9 Root-cause analysis

(3)

1.10 Woody plant

(3)

[30]

Question 2:

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

(5)

2.2. You have been asked to scientifically investigate reasons for the disappearance of kiaat (*Pterocarpus angolensis*) trees in the Zambezi Region. Describe step by step (using recognized scientific method, and a schematic diagram) how you would investigate this problem. You must use the example of kiaat in every step, just listing the steps of the scientific process will get no marks.

(12)

2.3 How will you communicate the findings of your research?

(5)

[22]

Question 3:

Choose one specific type of human wildlife conflict in a specified community. For example: Honey badgers raiding the bee hives of bee farmers in the Western Cape of South Africa.

3.1 Conduct a root-cause analysis on the problem.

(15)

3.2 Analyse the analysis above and suggest one control and two preventative mitigation measures to alleviate the problem.

(15)

[30]

Question 4:
Below is an excerpt from the Financial Times:

Hunting: The colour game is over

The breeding of wildlife to produce unusually coloured animals, in the hope that hunters would pay a lot more to shoot them, has fallen flat in a spectacular manner — with the practice being widely condemned

Critically analyse this statement and comment on the following questions:

4.1 Why did game farmers start breeding colour variant wildlife?

(5)

4.2 What caused the price of a black springbok to be N$ 25 000 compared to an ordinary springbok which sold for N$ 800 at the same time in 2016?

(5)

4.3 Why is the practice being condemned? Refer to economic and environmental reasons.

(5)

[15]

Question 5:

A game count for a hunting farm of 15 000 ha is provided below:

Species	Number	GU equivalent	BU Equivalent
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:

4.1 Species richness

(2)

4.2 Suitability of the wildlife species for the area

(5)

4.3 Stocking rates for graze and browse.

(20)

[27]

Question 5: Climate change

5.1 Suggest reasons how a larger temperature rise is likely to increase the severity of environmental impacts.

(10)

5.2 Why is carbon dioxide the focus of so much attention regarding climate change?

(6)

5.3 How are "climate variability" and "climate change" different or the same?

(4)

5.4 A tree takes CO2 from air and converts it to plant carbon, but then returns the carbon back to the atmosphere as carbon dioxide or methane (both of which are greenhouse gases). So why is reforestation promoted as practice that will suppress global warming?

(5)

[25]

Total: 150