



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF NATURAL RESOURCES MANAGEMENT (NATURE CONSERVATION)	
QUALIFICATION CODE: 07BNTC	LEVEL: 6
COURSE CODE: ALS610S	COURSE NAME: Animal studies 2
DATE: June 2019	
DURATION: 3 HOURS	MARKS: 150

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Mr R. Kavari
MODERATOR:	Ms L. Theron

INSTRUCTIONS
<ol style="list-style-type: none">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 5 PAGES (Including this front page)

SECTION A
(Terminology)

QUESTION 1

Give the correct scientific term for each of the following ethological descriptions.

[10]

- 1.1 Active at dusk and dawn.
- 1.2 Animals living in trees or spending most of their time in trees.
- 1.3 A non-social behaviour where a random and spontaneous response becomes associated with a particular stimulus because that response has always produced a reward. E.g. *Planaria* feeding.
- 1.4 Unselfish behaviour at the cost of an animal, done to benefit another, e.g. vampire bats sharing blood.
- 1.5 The use of urine, dung or glandular secretions to mark an object or partner to show ownership or declare presence by smell.
- 1.6 Behaviour that clearly warns that an animal is about to attack, etc. snarling in dogs.
- 1.7 A configuration of blood vessels (arteries and veins) in a sinus at the base of the brain. The structure that helps to keep the brain cooler than the body in desert adapted antelopes such as *Oryx gazelle* and *Antidorcas marsupialis*.
- 1.8 A thick layer of vascularized adipose tissue under the skin of all cetaceans, pinnipeds and sirenians. Its functions are to store energy, insulates heat, and increases buoyancy.
- 1.9 A group of females guarded by a male who maintains mating rights over them by driving off other males.
- 1.10 An organic relic from a previous geologic period preserved by natural means in rocks or softer sediments that affords information about the character of the original animal.

QUESTION 2

Give the scientific name of each of the following mammals (spelling counts).

(5)

- 2.1 Lesser bush baby
- 2.2 White rhino
- 2.3 Suricate
- 2.4 Springbok
- 2.5 Klipspringer

Give the supercohort and order to which each of the following mammals belongs (spelling counts).

(5)

- 2.6 *Orycteropus afer*
- 2.7 *Papio ursinus ursinus*
- 2.8 *Syncerus caffer*
- 2.9 *Melivora capensis*
- 2.10 *Smutsia temminckii*

[10]

QUESTION 3

Clearly distinguish between the following (Use realistic examples):

[10]

- 3.1 Imprinting vs. Conditioning
- 3.2 Inter-digital glands vs. Pre-orbital glands
- 3.3 Parachute vs. Glide
- 3.4 Camouflage vs. Mimicry
- 3.5 Diphyodont vs. Polyphyodont

SUBTOTAL [30]

SECTION B (Ethology)

QUESTION 4

- 4.1 Advantages must outweigh disadvantages before social groups form. What are the benefits of living in social groups for wild animals? (5)
- 4.2 Discuss the anti-predator behaviour of *Procapra capensis*. (5)
- 4.3 Make use of a Namibian example to explain the solitary/non-territorial social organization found in some antelope species. (4)
- 4.4 You are tour guiding a group of visitors in Etosha National Park. One of your tourists want to know what zebra species occur in the park and how to distinguish one species from another, looking at physical features. Please respond to that. (10)

[24]

QUESTION 5

You have to give a talk to an environmental club at NUST. Your topic is "The importance of Tactile communication in Mammals". You must include examples of how and why ruminants, non-ruminants, carnivores and primates make use of tactile communication. Provide a script of your full report.

[13]

QUESTION 6

- 6.1 Discuss advantages of ruminant digestion. (6)
- 6.2 The calves of all but 2 tribes of African bovids are "hidlers"
 - (a) Name the two African bovids whose calves are not "hidlers". (1)
 - (b) Write a short paragraph on "hidlers". (4)

[11]

QUESTION 7

- 7.1 Give 3 behavioural characteristics of each of the following mammal families. (6)
Hyaenidae
Felidae
- 7.2 Describe parental care/parent-offspring behaviour in a matriarchal society of *Loxodonta africana*. (6)
- 7.3 Give 4 behavioural characteristics of the family Hippotamidae. (5)
- [17]

SUBTOTAL [65]

SECTION C (Adaptations)

QUESTION 8

- 8.1 Name and explain the 3 main groups of adaptations and give one example for each group. (9)
- 8.2 Explain the seasonal adaptations that will take place in the body of an animal preparing for hibernation. (3)
- 8.3 Explain the advantages of having different feeding strategies in birds. (2)
- [14]

QUESTION 9

- 9.1 In order to run well, an animal must overcome various problems, for example, be able to control its course. List 4 other problems that runners (cursor) animals must overcome. (4)
- 9.2 Provide 4 examples of Namibian animals that handle active prey and explain how they do it. (4)
- 9.3. Discuss structural adaptations of aquatic animals. (6)
- 9.4 Name and briefly describe any 3 ways of digging as an adaptation for survival. Provide an example of a species for each. (9)
- [23]

SUBTOTAL [37]

SECTION D
(Zoogeography)

QUESTION 10

- 10.1 Use Darwin's finches on the Galapagos Islands to explain Adaptive Radiation. (6)
- 10.2 State in which zoo-geographic region each of the following animals occurs. (3)
- a) Sloth
 - b) Lemurs
 - c) Wild boar
- 10.3 In plate tectonics, the lithospheric plates ride on the asthenosphere. These plates move in 3 ways. Discuss these 3 types of boundaries and what each creates/causes. Make use of drawings to further clarify your answers. (9)

[18]

SUBTOTAL [18]

TOTAL [150]