



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES**

**DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES**

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

<b>SUPPLEMENTARY / SECOND OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	Mr R. Kavari
<b>MODERATOR:</b>	Ms L. Theron

<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 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 A group of females that is defended by a territorial male against other males, mainly for mating rights etc. zebra.
- 1.2 A young/off-spring of a warthog.
- 1.3 The behaviour of male birds and other animals aimed at attracting a mate.
- 1.4 Distance to which a threatened animal will allow a predator to come before it starts running. (2 words)
- 1.5 A periodic condition in bull (male) elephants; characterized by highly aggressive behaviour and accompanied by a large rise in reproductive hormones.
- 1.6 A group of females rearing young ones. E.g. *Aepyceros melampus*.
- 1.7 Antelopes that have a tendency of concealing their calves/ and or lambs from time of birth till about 2 months.
- 1.8 Social grooming between members of the same species.
- 1.9 The occurrence of two clearly different phenotypes existing in the same population of a species.
- 1.10 The biological study of the geographic distribution of animals, especially the causes and effects of such distribution.

**QUESTION 2**

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

(5)

- 2.1 Plains zebra
- 2.2 Black-faced impala
- 2.3 Cheetah
- 2.4 Spotted Hyaena
- 2.5 Steenbok

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

(5)

- 2.6 *Procapra capensis*
- 2.7 *Madoqua kirkii*
- 2.8 *Ceratotherium simum*
- 2.9 *Papio ursinus ursinus*
- 2.10 *Orycteropus afer*

[10]

**QUESTION 3**

Make use of appropriate examples to explain each of the following terms.

[10]

- 3.1 Rut
- 3.2 Flehmen response
- 3.3 Home range

- 3.4 Hibernation
- 3.5 Matriarchal society

**SUBTOTAL [30]**

**SECTION B**  
(Ethology)

**QUESTION 4**

- 4.1 Use a realistic example of mammal to explain the 4 aspects that explain why animals behave in a particular way at a particular time. (12)
  - 4.2 Name two matriarchal mammals studied and describe the social structure, including hierarchy in each. (8)
  - 4.3 Describe the fleeing posture of warthogs. (2)
  - 4.4 Distinguish between sedentary and migratory using examples discussed in class. Also explain how this affects parent/offspring behaviour. (8)
  - 4.5 The most commonly observed social interaction between giraffes is a behaviour known as "necking". Briefly describe this social interaction. (4)
- [34]**

**QUESTION 5**

- Provide 7 clear behavioural differences between a black rhino and a white rhino. (14)

**QUESTION 6**

- 6.1 Explain the behaviour associated exclusively with ruminants. (6)
  - 6.2 Discuss one disadvantage of ruminant digestion. (1)
  - 6.3 Explain (with an example) a solitary/non-territorial social organization found in Bovidae. (2)
- [9]**

**QUESTION 7**

- 7.1 Compare the hunting strategies of *Acinonyx jubatus* and *Lycaon pictus* by pointing out the similarities and differences. (10)
- 7.2 When is the Aardvark, *Orycteropus afer*, usually active and how is it adapted to its diet? (4)
- [14]

**SUBTOTAL [71]**

**SECTION C**  
(Adaptations)

**QUESTION 8**

- 8.1 Discuss the criteria that will determine how well a population is adapted to new conditions at any given time. (6)
- 8.2 You are working in an Animal Factory. You were given the opportunity to design a very well-adapted **scansorial** animal. Provide 8 characteristics that you would put into your design and explain the need/importance for each characteristic. (16)
- [22]

**QUESTION 9**

- 9.1 Define adaptive convergence and make use of (a) Oceanic vertebrates and (b) Aquatic vertebrates to demonstrate it. (9)
- 9.2 Explain how you can use skull morphology to determine the feeding type/habit of an animal. (3)
- [12]

**SUBTOTAL [34]**

**SECTION D**  
(Zoogeography)

**QUESTION 10**

- 10.1 Name all the zoogeographic regions. (3)
- 10.2 According to scientists South America, Africa, India, Australia and Antarctica were formerly connected to each other, forming a large land mass known as Gondwanaland. On what evidences do they base these allegations? (8)
- 10.3 State in which zoo-geographic region each of the following animals occur naturally: (4)
- (a) Anteater
  - (b) Cassowaries
  - (c) Caribou
  - (d) Orangutan

[15]

**SUBTOTAL [15]**

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**TOTAL [150]**