NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH, APPLIED SCIENCES AND NATURAL RESOURCES

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF NATURAL RESOURCES MANAGEMENT	
QUALIFICATION CODE: 07BNRS	**LEVEL:** 7
COURSE CODE: ZLY621S	**COURSE NAME:** ZOOLOGY 2
DATE: NOVEMBER 2022	
DURATION: 3 HOURS	**MARKS:** 150

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

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 4 PAGES (Excluding this front page)

SECTION A: Terminology

QUESTION 1

Give the correct zoological term for each of the following descriptions:

1.1 An act or process where birds shed off worn feathers and snakes shed off old skin to make way for a new growth. (1)

1.2 A type of snake venom that attacks the body cells or tissues; extremely painful, with much swelling and marked symptoms of shock. (1)

1.3 When an animal looks like something else that is meant to be seen (not hidden). For example, a harmless moth might look like a dangerous wasp. A tasty butterfly may look like one that is full of nasty toxins. The animal is not protected by hiding, it is protected by being mistaken for something a predator will avoid because it's dangerous or tastes bad. (1)

1.4 A term given to indicate that an animal is active at dusk and dawn. (1)

1.5 A group of females together at centre of society and where males are on periphery (only allowed in for mating) e.g. Elephants. (1)

1.6 Area occupied by an individual/group over time (usually for feeding)/where animals roam periodically to meet their daily needs. (1)

1.7 The use of urine, dung or glandular secretions to mark an object or partner to show ownership or declare presence by smell. (1)

1.8 A group of females with young ones only. e.g. as observed in impalas. (1)

1.9 A word used to refer to vertebrates that have special adaptations to climb trees. (1)

1.10 Study of the role of biotic and abiotic interactions that influence animal distributions. (2 Words) (1)

[10]

QUESTION 2

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

2.1 Cheetah (1)
2.2 Ardvark (1)
2.3 Honey badger (1)

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

2.4 *Procavia capensis* (1)
2.5 *Galago moholi* (1)
2.6 *Antidorcas marsupialis* (1)

[6]

QUESTION 3

Clearly distinguish between the following (Use realistic examples):

3.1 Imprinting vs. Conditioning (2)

3.2 Altricial vs. Precocial chicks (2)

3.3 Pre-Orbital glands vs. interdigital glands (2)

3.4 Diurnal vs Nocturnal (2)

3.5 Striking distance vs Flight distance (2)

[10]

QUESTION 4

4.1 As an environmental education officer at Okatjikona EE center, clearly explain to a group of visiting students, the differences between tortoises, terrapins and turtles, with regard to their habitat, physical appearance and what they feed on. (9)

4.2 Explain how birds use their tails to aid their survival. (4)

4.3 Clearly differentiate between a true endemic and a near-endemic species. (2)

4.4 Give both the common and scientific names of the Namibian endemic **ground squirrel**, and give **one** characteristics you as a tour guide in Etosha National Park can use to distinguish it from the similar-looking South African ground squirrel, that also occurs in Etosha. (3)

[18]

SECTION B: Ethology

QUESTION 5

5.1 Whatever form it may take, language is the primary link between members within social units. Animals are constantly sending each other signals. Name the 4 forms of communication that animals use to send messages to one another and provide a practical example for each. (i.e. form of communication, message, purpose of message) (12)

5.2 Name and use a realistic example to explain the 4 aspects that tell us why animals behave in a particular way at a particular time. (8)

[20]

QUESTION 6

6.1 Describe the parent-offspring behaviour of *Loxodonta africana.* (5)

6.2 Briefly describe how *Galago moholi* communicate with each other. (3)

6.3 Provide common characteristics that links animals in the order primates. (4)

6.4 Describe the social organisation of rock dassie. (5)

[17]

QUESTION 7

7.1 Compare the hunting strategies of the following carnivores: **[9]**

7.1.1 Cheetah

7.1.2 Spotted Hyaena

7.1.3 African Wild dogs

QUESTION 8

8.1 Ruminants have superior ability to convert indigestible cellulose into digestible carbohydrates. Briefly discuss 3 further advantages of ruminant digestion. (3)

8.2 Explain (with an example) a solitary + territorial social organization found in Bovidae. (7)

[10]

QUESTION 9

9.1 Provide 3 clear behavioural differences between the black rhino and white rhino. (6)

9.2 Briefly discuss the behaviour between zebra mares and their offspring from the time of birth to the end of association. (5)

9.3 Briefly describe the territorial posture/display as performed by wildebeest bulls. (3)

[14]

SECTION C: Adaptations to different lifestyles

QUESTION 10

10.1 Adaptations help organisms survive in their ecological niche or habitat. Use appropriate examples to distinguish between anatomical, behavioural and physiological adaptations. (6)

10.2 Define adaptive convergence and

make use of (a) Oceanic vertebrates and (b) Aquatic vertebrates to demonstrate it. (6)

10.3 Name any 2 structural adaptations found in fossorial animals and explain how each adaptation is useful. (4)

10.4 What are the advantages of the ability to swim and dive in animals? (3)

10.5 Explain the seasonal adaptations that will take place in the body of an animal preparing for hibernation. (2)

10.6 What are the advantages to species that can run fast and far? (3)

[24]

SECTION D: Zoogeography

QUESTION 11

11.1 Name 6 possible ways in which animals can become distributed. (6)

11.2 Write a short essay to discuss the advantages and disadvantages of biological pest control, using examples. (Refer to movement/translocation of animals. (6)

[12]

TOTAL [150]

End