



<b>FACULTY</b>	Agriculture, Engineering & Natural Sciences		
<b>DEPARTMENT</b>	Environmental Science		
<b>SUBJECT</b>	Conservation Biology and Biodiversity		
<b>SUBJECT CODE</b>	EBL 3771		
<b>DATE</b>	July 2022		
<b>DURATION</b>	3 Hours	<b>MARKS</b>	120

### **SUPPLEMENTARY EXAMINATION**

**Examiners:** Mrs. M.A. Morkel

**Moderator:** Dr C Nesongano

This examination consists of 3 pages including the front page.

#### ***Instructions***

- Answer all questions from Section A
- Answer only 2 questions from Section B
- The use of scientific calculators is allowed

**University of Namibia Examinations**

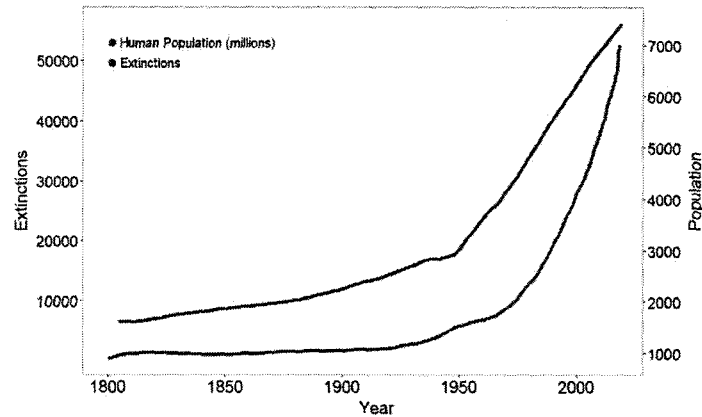
## Section A

Answer all questions from this section

### Question 1 [20 marks]

1.1

## Humans & The Extinction Crisis



Data source: Scott, J.M, 2008. *Threats to Biological Diversity: Global, Continental, Local*. U.S. Geological Survey, Idaho Cooperative Fish and Wildlife, Research Unit, University Of Idaho.

- a) Describe the trend that is depicted in the graph above (1)
- b) Critically assess the importance of this trend as it relates to conservation? (4)

1.2 Indicate how factors such as topography, habitat size, and elevation influences species richness patterns. (5)

1.3 Explain the terms externalities, market failure, and the tragedy of the commons and their implications for biodiversity. (5)

1.4 Explain the importance of the Namibian constitution in the conservation of natural resources in the country by referring to a specific Article in the constitution. (5)

### Question 2 [20 marks]

2.1 Explain the edge effect as a potential problem to reserve design. (10)

2.2 Explain why the presence of a cheetah population (*Acinonyx jubatus*) in an area could cause the area to be highly prioritized for protection. (6)

2.3 Explain the term 'discount rate' as well as the argument that it is based on and the potential implications of this argument. (4)

**Question 3 [20 marks]**

3.1 Briefly describe the various ways in which new populations can be established in an area. (10)

3.2 Discuss some examples of ex-situ conservation efforts and their role in conserving species. (10)

**Section B**

Answer only **two** questions from this section

**Question 1 [30 marks]**

With the use of appropriate examples, fully discuss alien invasive species as a threat to biodiversity.

**Question 2 [30 marks]**

Fully discuss the six considerations of reserve design.

**Question 3 [30 marks]**

Review the various prioritization systems that can be used in the establishment of protected areas.

-----**END OF EXAMINATION**-----