



<b>FACULTY</b>	AGRICULTURE, ENGINEERING & NATURAL SCIENCES		
<b>DEPARTMENT</b>	ENVIRONMENTAL SCIENCE		
<b>SUBJECT</b>	ECOLOGICAL SYSTEMS AND CLIMATE CHANGE		
<b>SUBJECT CODE</b>	EBL 3741		
<b>DATE</b>	JUNE 2022		
<b>DURATION</b>	2 Hours	<b>MARKS</b>	90

**SUPPLEMENTARY EXAMINATION**

**Examiner:** Ms. E. M. Nangolo (University of Namibia)

**Moderator:** Dr. Hart (University of Namibia)

This <b>Examination</b> consists of 3 pages (including the front page)
Instructions <ul style="list-style-type: none"><li>• Answer all questions from Section A.</li><li>• Answer only 1 question from Section B.</li><li>• Label all your answers appropriately and neatly.</li></ul>

**UNIVERSITY OF NAMIBIA EXAMINATIONS**

## SECTION A

Answer all questions in this section. This section is worth 90 marks.

1. Explain why gender is an important aspect of climate change. (2)
2. Differentiate between climate mitigation and adaptation, providing a Namibian example for each. (4)
3. Briefly explain the greenhouse effect. (5)
4. Briefly discuss how the vulnerability index can be applied to different aspects of life. (5)
5. Discuss how traditional knowledge can add value to current knowledge. (5)
6. Describe 'Education, Training, Capacity Building and Institutional Strengthening' as a climate change cross-cutting issue. (5)
7. Explain why is traditional knowledge currently receiving interest in the climate change context. (5)
8. Explain artificial carbon sequestration. (5)
9. Briefly discuss how climate change may impact the different sectors in Namibia. (10)
10. Study the story below and answer the following questions. (8)

*Petrus hears on the radio that a drought is coming. Farmers are advised to reduce herd numbers. Though some family members don't want to sell, Petrus decides to sell most of his herd. The price for the animals is lower than he would like, but with the money he makes he starts a small business. He is also considering how to harvest and store water when it does rain*

*Johannes doesn't want to sell his animals. He says that he is nothing without his cattle and that he may need them in case of an emergency or a funeral. As the weeks pass it becomes hotter and drier and there is less grass and water for the animals. Many begin to die. His crops fail, leaving Johannes's family without a harvest and with little money for food.*

- a) Who made the wisest decision between Petrus and Johannes? Motivate your answer. (2)
- b) What other measures can you recommend to the two farmers to cope with drought? (6)

11. Outline the objectives of the Namibia National Climate Change Policy. (6)

### **Section B**

Answer one question from this section. This section is worth 30 marks.

#### Question 1

1. The Intergovernmental Panel on Climate Change (IPCC) defines vulnerability as “*The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes* . Discuss Namibia’s vulnerability to climate change. (30)

#### Question 2

2. Using a Namibian context, discuss the different climate mitigation and adaptation measures being practiced to live with climate change impacts. (30)

END OF EXAMINATION