



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES**

**DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES**

<b>QUALIFICATION: BACHELOR OF NATURAL RESOURCE MANAGEMENT</b>	
<b>QUALIFICATION CODE: 07BNRS</b>	<b>LEVEL: 7</b>
<b>COURSE CODE: CSE721S</b>	<b>COURSE NAME: CONSERVATION ECOLOGY 3</b>
<b>DATE: NOVEMBER 2022</b>	
<b>DURATION: 3 HOURS</b>	<b>MARKS: 80</b>

<b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S):</b>	PROF. T. WASSENAAR
<b>MODERATOR:</b>	DR GILLIAN MAGGS-KÖLLING

<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 (including additional illustrative material linked to specific questions)

**THIS EXAMINATION QUESTION PAPER CONSISTS OF TWO PAGES (excluding this front page)**

**Question 1:** Define evidence-based natural resource management. [4 marks]

**Question 2:** Explain the appropriate process for making a natural resource management decision based on scientific evidence. [10 marks]

**Question 3:** List and discuss the core skills of evidence-based decision-making. [10 marks]

**Question 4:** Name two key barriers to evidence-based decision-making in natural resource management. [4 marks]

**Question 5:** Define the concept patch dynamics. [4 marks]

**Question 6:** Explain how the concept of patch dynamics could be used in NRM. [4 marks]

**Question 7:** Define hierarchical patch dynamics. [4 marks]

**Question 8:** Essay question: Using an example from Namibia, explain the main components of the equilibrium-non-equilibrium debate in rangeland management, linking it to the phenomenon of land degradation. [20 marks]

**Question 9:** Diagram question: Using the extra supplied paper, describe, in the form of an annotated graphic, the main elements and their relationships in the role that fire plays in determining vegetation structure of savannas. What factors (such as e.g., fire intensity) determine the fire's outcome? How do they relate to each other? [20 marks]

