



**NAMIBIA UNIVERSITY**  
**OF SCIENCE AND TECHNOLOGY**  
**FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES**  
**SCHOOL OF AGRICULTURE AND NATURAL RESOURCE SCIENCES**  
**DEPARTMENT OF NATURAL RESOURCES SCIENCES**

QUALIFICATION : <b>BACHELOR of NATURAL RESOURCES MANAGEMENT</b>	
QUALIFICATION CODE: <b>07BNRS</b>	LEVEL: <b>7</b>
COURSE: <b>CONSERVATION ECOLOGY 3</b>	COURSE CODE: <b>CSE721S</b>
DATE: <b>JANUARY 2025</b>	SESSION: <b>1</b>
DURATION: <b>3 HOURS</b>	MARKS: <b>100</b>

**SECOND OPPORTUNITY: EXAMINATION**

**EXAMINER:** *Ms Vimbai Marufu*

**MODERATOR:** *Dr Chris Brown*

**INSTRUCTIONS:**

1. Read all questions carefully.
2. Answer all questions on the separate answer sheet.
3. Please write neatly and legibly.
4. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
5. No books, notes and other additional aids are allowed.
6. Mark all answers clearly with their respective question numbers.

**PERMISSIBLE MATERIALS:**

Pen

**This paper consists of 4 pages including this front page**



**SECTION A: GENERAL KNOWLEDGE****[ 25 ]****QUESTION 1: TRUE OR FALSE QUESTION****[5]**

Evaluate the statements below and state whether they are true or false

- 1.1 The frequency and season of burning are the main mechanisms through which fire influences vegetation structure.
- 1.2 Burning and herbivory have almost the same effects on trees.
- 1.3 In non-equilibrium dynamics, the system shows a strong evidence of degradation.
- 1.4 Area of land cover always does translate to suitability of a habitat.
- 1.5 The sequence and time over which a disturbance occur has the greatest impact on a system's resilience and recovery.

**QUESTION 2: CONCEPTS****[20]**

- 2.1 List the various aspects of the equilibrium theory. **[5]**
- 2.2 Explain how the concept of hierarchical patch dynamics is applied in NRM. **[4]**
- 2.3 Define the term "edge effect". **[4]**
- 2.4 Evaluate the factors to consider when managing at landscape level. **[5]**
- 2.5 Define the term resilience. **[2]**

**SECTION B: LONG ANSWER QUESTIONS****[ 75]**

Please answer ALL of the questions in this section.

**QUESTION 3: Evidence-based management:****[40]**

Invasive alien species are a major problem in our cities. *Leucaena leucocephala* has been used in many landscapes as an ornamental tree. There are several options to managing the problem of invasive alien species. What information do you need to prepare a management plan for these invasives? Where can you source such information? How trustworthy are such information sources?

**QUESTION 4: Drivers and disturbances:****[35]**

Below is a list of some of the drivers of an ecosystem. Choose one and discuss when it is a driver and/or disturbance in a savannah ecosystem.

Fire

Herbivory

Soil moisture availability

Erratic climate variability and climate change

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**END OF QUESTION PAPER**