

ESB 412



ALUPE UNIVERSITY

**OFFICE OF THE DEPUTY VICE CHANCELLOR
ACADEMICS, STUDENT AFFAIRS AND RESEARCH**

**UNIVERSITY EXAMINATIONS
2024 /2025 ACADEMIC YEAR
FOURTH YEAR SECOND SEMESTER REGULAR EXAMINATION

**FOR THE DEGREE OF BACHELOR OF
EDUCATION SCIENCE****

COURSE CODE: ESB 412

**COURSE TITLE: CONSERVATION & MANAGEMENT OF
NATURAL RESOURCES /ETHOLOGY**

DATE: 22nd April 2025

TIME: 8.00 am to 11.00 am

INSTRUCTIONS TO CANDIDATES

- **SEE INSIDE**

THIS PAPER CONSISTS OF 4 PRINTED PAGES

PLEASE TURN OVER

ESB 412

REGULAR – MAIN EXAM

**ESB 412: CONSERVATION & MANAGEMENT OF NATURAL RESOURCES
/ETHOLOGY**

STREAM: BED (SCIENCE)

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

- i. Answer ALL questions from section A and any FOUR from section B.*
- ii. Diagrams should be used whenever they serve to illustrate the answer.*
- iii. Do not write on the question paper.*

SECTION A (30 MARKS)

QUESTION ONE

- a. Define the following:
 - i. Climate (2 Marks)
 - ii. Weather (1 Mark)
 - iii. Natural resources (2 Marks)
 - iv. Ethology (2 Marks)
 - v. Sustainable resource use (2 Marks)
- b. Is inbreeding recommended in the management of natural resources? Justify. (4 Marks)
- c. What is the primary goal of natural resource management? (2 Marks)
 - A. To maximize profit from resources
 - B. To ensure the sustainability of resources for future generations
 - C. To make resources available to as many people as possible
 - D. To exploit resources for economic gain

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QUESTION TWO

- a. List any THREE roles played by herbivory in the ecosystem (3 Marks)
- b. Explain the meaning of the following
 - i. Predator-Prey cycles (3 Marks)
 - ii. Resource Availability cycles (3 Marks)
- c. Which of the following best describes the concept of "biodiversity"? (2 Marks)
 - A. The variety and variability of life forms on Earth
 - B. The process of conserving resources for future generations
 - C. The process of converting resources into marketable goods
 - D. The use of natural resources without regard to their sustainability
- d. List any TWO characteristics associated with the following environments:
 - i. Deserts (2 Marks)
 - ii. Forests (2 Marks)

SECTION B (40 MARKS)

QUESTION THREE

- i. Differentiate between *in situ* and *ex situ* conservation. (4 Marks)
- ii. Between *in situ* and *ex situ* conservation which is mostly preferred? Give reasons why it is preferred. (5 Marks)
- iii. What is cryopreservation? (1 Mark)

QUESTION FOUR

- i. Differentiate between herbivory and predation (4 Marks)
- ii. Explain any THREE types of herbivores (6 Marks)

QUESTION FIVE

Describe any FIVE modes through which diseases can be transmitted among wildlife. (10 Marks)

QUESTION SIX

- i. Explain the importance of the four questions of Ethology according to Tinbergen. (8 Marks)
- ii. List any TWO applications of the Four Questions of Ethology by Tinbergen. (2 Marks)

QUESTION SEVEN

Ethology has various applications in the real-world. Discuss any FIVE. (10 Marks)
