

**BINDURA UNIVERSITY OF SCIENCE EDUCATION**  
**FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE**

**DEPARTMENT: NATURAL RESOURCES**

**PROGRAMME: BSc NATURAL RESOURCES MANAGEMENT**

**COURSE CODE: NR 124 (2): Introduction to Wildlife and Aquatic Resources**

**DURATION: 2 HOURS**

**TOTAL MARKS: 70**

**1) INSTRUCTIONS TO CANDIDATES**

Answer **THREE** questions out of the following five questions. You must answer question **One** from **SECTION A** and any **Two** questions from **SECTION B**.

**SECTION A (COMPULSORY)**

1. a) Classify the African Elephant under the seven classification levels of living things (Linnaean classification). **[10 Marks]**  
b) Define the following;
  - i. Natality rate **[2 marks]**
  - ii. Mortality rate **[2 marks]**
  - iii. Fecundity **[2 marks]**
  - iv. Immigration **[2 marks]**
  - v. Emigration **[2 marks]**
- c) Outline 5 categories of specialist feeders in fish populations. **[5 Marks]**
- d) List the common types of distribution in living organisms. **[5 Marks]**

**SECTION B**

2. a) State the formula for the Mark-Release-Recapture Method and explain the meaning of each variable. **[10 Marks]**  
b) In a Mark-Release-Recapture study on an offshore island, 100 saddlebacks were caught using mist nets and marked with colour bands before being released. A second capture was conducted one week later. A total of 60 saddlebacks were caught, and 40 of these

were recaptures.

Estimate the abundance of saddlebacks on the island.

**[10 Marks]**

3. Discuss current threats to the freshwater fishes of Southern Africa.

**[20 marks]**

4. "Wildlife population growth is affected by both density dependent and density independent factors." Discuss.

**[20 marks]**

5. a) Outline 5 categories of aquatic ecosystems.

**[10 Marks]**

- b) Describe any 5 factors that affect fish distribution in tropical and subtropical areas.

**[10 Marks]**

**END OF PAPER**