BINDURA UNIVERSITY OF SCIENCE EDUCATION

DEPARTMENT OF BIOLOGICAL SCIENCES

BScBZH/HBScED/BScED

ECOLOGY (BZH 201/BZH114)

EXAMINATION
2 HOURS (100 MARKS) MAY 2024

INSTRUCTIONS
Answer FOUR questions. You MUST answer QUESTION 1 (Section A) and any THREE questions from Section B. Each question carries 25 MARKS. Where a question contains subdivisions, the mark value of each subdivision is given in brackets. Illustrate your answers where appropriate with large, clearly labelled diagrams. You should not spend more than thirty minutes on each question.

SECTION A (COMPULSORY)

1. (a) A summer camp in South Africa has a species of turtle living in their lake. They want to estimate how many turtles live in the lake. How can the capture-recapture method be used to estimate the population of turtles in the lake?. (15 marks)

   (b) What are the advantages and disadvantages of the method you described in 1(a) above? (10 marks)

SECTION B.

2. (a) Describe how density dependent and density independent factors regulate a population of a given species. (15 marks)
   (b) Describe the patterns of dispersion within a population's geographic range. (10 marks)

3. *Discuss animal defences against predators.*

4(a) Write short notes on any FIVE of the following:
   (i) Life Table. (5 marks)
   (ii) Gause's competitive exclusion principle. (5 marks)
   (iii)Nitrogen fixation. (5 marks)
   (iv)Eutrophic lakes. (5 marks)
   (v) Bioaccumulation. (5 marks)
   (vi) Energy flow in an ecosystem. (5 marks)

5. Discuss the main stages of primary succession.

6. (a) Describe the causes of water pollution. (15 marks)
(b) Discuss measures to reduce water pollution (10 marks)

END OF EXAMINATION QUESTION PAPER