# BINDURA UNIVERSITY OF SCIENCE EDUCATION

## FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCES

### DEPARTMENT: NATURAL RESOURCES

### PROGRAMME: BSc. NATURAL RESOURCES MANAGEMENT

### COURSE CODE: NRW 209(2): Aquaculture

DURATION: 2 HOURS                                    TOTAL MARKS: 70

**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) Explain the following aquaculture terms;
    i) Condition Factor (C.F.).                                    [2 marks]
    ii) Specific Growth Rate (SGR).                              [2 marks]
    iii) Food Conversion Ratio (FCR)                            [2 marks]
    iv) Food Conversion Efficiency (FCE).                       [2 marks]

   b) Outline the factors to be considered before setting up a pond fish farm.                                                          [8 marks]

   c) Explain the following:
    i) TSS.                                                              [2 marks]
    ii) TDS.                                                             [2 marks]
    iii) BOD.                                                            [2 marks]
    iv) COD.                                                             [2 marks]
   d) Distinguish between an oligotrophic and eutrophic lake.           [6 marks]

## SECTION B

2) Outline 4 production systems used in freshwater fish farming.          [20 marks]
3) The Manager of a fish farm that is located downstream of a fertiliser-manufacturing factory suspects that there is pollution from the factory. Outline a research protocol to determine if this assertion is true.                                                         [20 marks]
4) Discuss 5 common diseases that occur in tilapia fish farming.          [20 marks]
5) "Smallholder fish farming is important for household income and food security in Zimbabwe." Discuss.                                      [20 marks]

### END OF PAPER