

BINDURA UNIVERSITY OF SCIENCE EDUCATION  
FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE  
DEPARTMENT: NATURAL RESOURCES

PROGRAMME: BSc NATURAL RESOURCES MANAGEMENT

OCT 2024

COURSE CODE: NRM220 (1): INTEGRATED WATER RESOURCES MANAGEMENT

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.

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**SECTION A (COMPULSORY)**

1. (a) List the four Dublin principles. [4 Marks]
- (b) (i) Outline water related challenges that can be addressed through Integrated Water Resources Management (IWRM). [5 Marks]
- (ii) Explain the importance of virtual water in national food security. [5 Marks]
- (c) Describe the economic instruments that are used in controlling water demand in a catchment. [6 Marks]
- (d) Highlight factors that should be considered in water allocation and prioritization for a given catchment. [10 Marks]

**SECTION B**

2. Evaluate the contribution of freshwater resources to the attainment of Sustainable Development Goals. [20 Marks]
3. (a) Explain why a river basin is a logical unit for implementing IWRM. [10 Marks]
- (b) Explore the importance of inter-sectoral stakeholder participation and cooperation in shared water resources. [10 Marks]
4. Assess the impact of human activities on the water balance. [20 Marks]

5. Outline the following:

(a) Unique characteristics of water.

[10 Marks]

(b) Practical options that can be employed to cope with projected global freshwater demand.

[10 Marks]

**END OF PAPER**