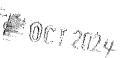
### BINDURA UNIVERSITY OF SCIENCE EDUCATION

# FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE

**DEPARTMENT: NATURAL RESOURCES** 

PROGRAMME: BSc NATURAL RESOURCES MANAGEMENT



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.

### 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 Márks]

(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]

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- 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