



*“Investing in Africa’s Future”*

## **COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES**

**DEPARTMENT OF ENVIRONMENTAL STUDIES AND NATURAL RESOURCES**

**NANE 403: MANAGEMENT OF DRAINAGE BASINS AND WATER RESOURCES**

**END OF FIRST SEMESTER EXAMINATIONS**

**NOVEMBER/DECEMBER 2020**

**LECTURER: MS M. C. KUREHWATIRA**

**DURATION: 24 HRS**

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### ***INSTRUCTIONS***

- Type your Registration Number
- Answer only **one question** of your choice.
- Each full question carries 100 marks.
- Begin your answer for each question on a new page.
- Your full answer should be between 10 and 15 pages
- Font: Times New Roman; Font size 12; Line space: 2.0.
- Credit is given for neat, well-written and lucid work.

### **Question 1**

- a) Stakeholder participating is an important principle in Integrated Water Resources Management (IWRM). Comment on this statement. **[30 marks]**
- b) For a selected African country, identify the IWRM stakeholders and describe in detail their roles in IWRM. **[30 marks]**
- c) Water security is achieved when there is enough water for everyone in a region and the water supply is not at risk of disappearing. Outline in detail how you would ensure a water secure Africa. **[40 marks]**

### **Question 2**

- a) In order to reduce poverty; achieve food security, economic growth and energy security, water is the nexus. Using examples from Africa, discuss this statement. **[40 marks]**
- b) The concept of WASH groups together water supply, sanitation and hygiene. With reference to examples from Africa, provide a detailed rationale for this integration. **[30 marks]**
- c) Water resource management is the activity of planning, developing, distributing and managing the optimum use of water resources. Give a detailed analysis of how this can be achieved. **[30 marks]**

### **Question 3**

- a) Water is an essential, limited and fragile natural resource that shapes regional landscapes and is vital for ecosystem functioning and human well-being. However, water resources are under considerable pressure from anthropogenic activities. Give a critical analysis of the water resources challenges being faced by the world today and propose potential solutions to these challenges. **[60 marks]**
- b) Describe in detail the water resources management institutions in your country and highlight their roles. **[40 marks]**

**END OF EXAMINATION PAPER**