



# GWANDA STATE UNIVERSITY

FACULTY OF ENGINEERING AND ENVIRONMENT

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL SCIENCE

PRINCIPLES OF HYDROLOGY

NES 1103

Main Examination Paper

June 2024

This examination paper consists of 2 pages

**Time Allowed: 3 hours**

**Examiner's Name: Mr. M. Magenge**

## INSTRUCTIONS

1. Answer any **FOUR** questions
2. Each question carries 25 marks.
3. Credit will be given to answers that are clear, illustrated, concise, and grammatically well-constructed

1. Examine the relationship of hydrology and other geographical disciplines. [25]
2. The hydrological cycle has no beginning or end as water is ceaselessly transferred from the sea to the land and back to the sea. Elaborate. [25]
- 3a. Explain the following concepts:
  - i. Water crisis [3]
  - ii. Water stress [3]
  - iii. Water scarcity [3]
- b. Evaluate measure that can be taken to address water shortages in Zimbabwe. [19]
- 4a. Define the following terms:
  - i. Actual evapotranspiration [3]
  - ii. Evapotranspiration [3]
  - iii. Potential evapotranspiration [3]
- b. Discuss the view that evaporation is not a loss. [19]
5. Discuss factors that affect infiltration. /runoff [25]
6. Assess the significance of water on the socioeconomic development of Zimbabwe. [25]

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