



GWANDA STATE UNIVERSITY

FACULTY OF NATURAL RESOURCES MANAGEMENT AND AGRICULTURE

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL SCIENCE

STATISTICS FOR GEOGRAPHERS

NGE2105

Final Examination Paper

DECEMBER 2024

This examination paper consists of 2 pages

Time Allowed: 3 hours

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.

Department of Geography and Environmental Science

1. Assess the significance of any two sampling methods of collecting Geographic data. [25]
2. The pH of two rivers was measured over a period of 8 months and the mean monthly values were as shown in the table;

Mutirikwi	7.5	5.0	5.5	6.5	8.0	7.7	6.8	8.5
Mukuvisi	6.7	7.2	7.2	6.9	7.3	6.8	6.6	6.9

Calculate the:

- a. Mean pH for the each of the two rivers. [5]
 - b. Standard deviation of pH for the two rivers. [10]
 - c. Using the answers from (a) and (b) above, elaborate on the assertion that in the absence of measures of dispersion, the arithmetic mean is uninformative. [10]
3. Examine the errors associated with hypothesis testing.[25]
 - 4a. Explain the following concepts;
 - i. ordinal data [5]
 - ii. nominal data [5]
 - iii. interval data [5]
 - b. Examine the statistical methods used to gather Geographic data. [10]
 5. With the aid of a clearly labelled diagram, explain the four components of a time series. [25]
 - 6a. Outline the steps followed in hypothesis testing. [16]
 - b. Discuss the significance of a statistical hypothesis testing.[9]

<< END OF PAPER >>