



GWANDA STATE UNIVERSITY

FACULTY OF ENGINEERING AND ENVIRONMENT

DEPARTMENT OF GEOMATICS AND SURVEYING

RESEARCH METHODS FOR ENGINEERS

ESG 5105

Final Examination Paper

September 2024

This examination paper consists of 2 pages

Time Allowed: 3 hours

Total Marks: 100

Examiner's Name: Dr. L. Makwati

INSTRUCTIONS

Answer four questions of your choice.

Question 1

As a Survey and Geomatics expert which research paradigm is applicable to your field study. Discuss. (25)

Question 2

“Data must be reduced to meaningful information.” Validate this statement and indicate how research data can be presented.

Question 3

Discuss how research designs differ in terms of the relationship between the researcher and its subjects. (25)

Question 4

Name four types of sampling methods in quantitative research, and provide a descriptive example of instances in which each method may be used. Demonstrate what they have to offer in terms of representativity and generalization (25).

Question 5

Critique how Artificial Intelligence, (AI) tools are aiding research for surveyors.

Question 6

List and expand on all stages that are involved in developing a research report.