

WOMEN'S UNIVERSITY IN AFRICA



Addressing gender disparity and fostering equity in University Education

FACULTY OF SOCIAL AND GENDER TRANSFORMATIVE SCIENCES

MASTER OF SCIENCE IN DISASTER RISK AND LIVELIHOOD STUDIES

MAIN PAPER

MDLS121 RESEARCH METHODS AND TECHNIQUES

INTAKE 1: FIRST YEAR SECOND SEMESTER

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Answer **two** questions.
2. All questions carry all equal marks

Question 1

Analyse the importance of using secondary and other available sources of information in research. [25]

Question 2

Discuss the challenges of determining the sample size for a study topic of your choice. [25]

Question 3

The following table provides data on the effect of fertiliser on plant growth. Assuming that data do not follow a normal distribution and using a significance level of 0.05, with sample sizes of $n_1 = 6$ and $n_2 = 6$, the critical U value for a two-tailed test is 5.

Control Group	Experimental group
Number of leaves	Number of leaves
3	9
4	7
2	5
6	10
2	6
5	8

- a) State the null and alternative hypotheses to be tested in this experiment. [5]
- b) Determine whether the effect of fertilizer is statistically significant. **Show all your working.** [15]
- c) Interpret the results. [5]

Question 4

Using examples, explain correlation analysis. [25]

Question 5

Demonstrate and justify the logic behind an experimental test of a hypothesis. [25]

END