

UNIVERSITY OF FORT HARE

RESEARCH METHODOLOGY AND PSYCHOMETRICS

**IPS 311/315**

**UNDERGRADUATE MAIN EXAM PAPER**

JUNE 2023

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TIME : 3 Hrs.

SUBJECT : RESEARCH METHODOLOGY AND PSYCHOMETRICS

MARKS : 100 Marks

This paper consist of THREE (3) pages including the cover page

Internal Examiner  
Mrs NI Gcaza (UFH)

External Examiner  
Mr MA Themba (UJ)

**INSTRUCTIONS:**

Read carefully and answer ALL questions in this paper.

## **QUESTION 1**

As a final year UFH undergraduate student in the Department of Industrial Psychology, it is imperative that you get introduced to Research Methodology, Basic Statistics, and Psychometrics, which is exactly what the IPS 311/315 module is doing for you. To ascertain this introduction, please read the abstracts below and answer questions on key concepts that are fundamental to the language of research.

### **1.1 Abstract:**

The purpose of this study was to understand the effects of school meals on the academic performance of primary school children in poor school district. There are 7 350 children in the school district. A representative selection of 736 pupils was randomly assigned to two equal groups, one receiving a school meal every morning, and another not. Every three months, the children in each group were tested in three different school subjects to determine their academic performance. The study found that on average, children who received school meals consistently outperformed those who did not by at least (10-15) % in each of the three school subjects.

- a) What is the population in this study? Explain (2)
- b) Indicate the size of both the population and the sample. (2)
- c) Identify the treatment or intervention in this study. Explain. (2)
- d) Which group of children formed the control group? What name would you then give to the other group? (2)
- e) Do you think this was a quantitative or a qualitative study? What is the difference between the two? (2)

### **1.2 Scenario:**

A researcher sets out to determine whether there is a relationship between the length of school day and learner performance. The researcher is not interested in whether there is a causal relationship between the variables, her interest is simply in establishing whether there is a measure of association between the variables.

- a) What are the two pertinent variables in this study? (2)
- b) Which is the dependent variable? Explain. (2)
- c) Which is the independent variable? Explain. (2)

1.3 You have recently submitted an assignment in which you were tasked to develop a research proposal. Please explain to your classmates the two main aims of any research proposal. (4)

**/20 marks/**

**QUESTION 2**

2.2 Anol Battacherier suggests that the scientific method must satisfy four characteristics. Discuss these characteristics. (8)

2.3 Depending on the purpose of research, scientific research projects can be grouped into three types. With examples, identify and explain these types. (12)

**/20 marks/**

**QUESTION 3**

The structure of a research proposal can take a particular format. Indicate this format and give a clear description of what each element is about. (20)

**/20 marks/**

**QUESTION 4**

Who was Francis Galton? Discuss giving clear, relevant examples to demonstrate your understanding of his work. (20)

**/20 marks/**

**QUESTION 5**

5.1 What are the advantages of using an Ordinal Scale? (5)

5.2 Giving examples (i.e. using data sets), explain the measures of central tendency, indicating clearly how, when, and when not to use them in explaining averages. (15)

**/20 marks/**

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