



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF HEALTH, SCIENCE AND TECHNOLOGY

DEPARTMENT OF DIGITAL TECHNOLOGY

EXAMINATION PAPER

COURSE CODE : MIS 214
COURSE TITLE : Research Methods for Computing and Technology
SPECIAL REQUIREMENTS : None
DURATION : 3 Hours
LEVEL : ~~2.1~~
DATE : August 2022

01 DEC 2022

INSTRUCTIONS TO CANDIDATES:

1. The question paper has 5 questions.
2. Answer any 4 questions.
3. Each question carries 25 marks

Question 1

Suppose you are working on an article stating that children in Botswana watch an average of 4 hours of Television per week.

- a. Define the terms [3]
 - i. Hypothesis [3]
 - ii. Dependant variable [3]
 - iii. Independent variable [3]
 - iv. null hypothesis [3]
 - v. alternate hypothesis [3]
- b. Determine the null hypothesis and the alternate hypothesis for the above research work. [6]
- c. Write research objectives for the above article [4]

Question 2

Consider the following scenario and answer the questions that follow:

Working Street Children in Harare, Zimbabwe

Poverty is forcing more and more children to seek work on the streets of Harare, enabling them to take an active role in sustaining themselves and their families. Whilst most children live with family or relatives, some children live on the street with no adult supervision and care. Children are typically employed as street vendors, car washers, shoe-shiners and as beggars and scavengers. Furthermore, large numbers of children are picked up on the street to do ad hoc domestic work, particularly girls, often performing physically-demanding tasks in situations where they face risk of abuse and exploitation behind the walls of private homes.

Regardless of the type of labour, working street children often miss out on regular schooling and on opportunities that would enable them to pursue their right to a 'normal' childhood and a dream to escape poverty. They are often required to engage in risky, heavy and age-inappropriate forms of labour, which, among other issues, can have serious consequences for their physical and emotional health.

- a. What do you understand by research [3]
- b. Design research questions for the above scenario [4]
- c. Design study objectives for the above scenario [4]
- d. Which study design is most appropriate to answer your question, support your answer? [4]
- e. Which sampling techniques do you find most suitable [5]
- f. Which type of bias are likely to occur, how can they occur? [5]

Question 3

- a. What do you understand by bias in research [2]
- b. What are the causes of research bias [9]
- c. How can bias in research be reduced [9]
- d. Why is the understanding of bias important in research [5]

Question 3

- a. What is data [2]
- b. What are the data gathering techniques [5]
- c. Discuss any five data gathering techniques [10]
- d. What are the benefits of collecting data in research [4]
- e. What is the difference between validity and reliability [4]

Question 4

- a. What is data analysis [3]
- b. What are the purposes of data analysis? [5]
- c. Define the following types of data analysis
 - i. Exploratory [3]
 - ii. Quantitative [3]
 - iii. Descriptive [3]
- d. Quantitative and qualitative research methods are the among the mostly commonly applied research methods. Describe each of these two research methods in detail and give examples of how you will apply qualitative and quantitative research methods in typical research situations of your own making. [8]