CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF SCIENCE IN ACTURIAL SCIENCE**

ACMT 111: COMPUTATIONAL METHODS AND DATA ANALYSIS 1

STREAMS: BSC (ACMT)   **TIME: 2 HOURS**

DAY/DATE: TUESDAY 11/04/2023   **11.30 A.M. – 1.30 P.M.**

INSTRUCTIONS:

QUESTION ONE (30MARKS)

a)   Define what is survey in data analysis   (2 marks)

b)   List and explain three sources of errors in statistics   (6 marks)

c)   Explain what is meant by uncertainty analysis   (2 marks)

d)   List and explain three ways in which statistical packages can be applied.   (6 marks)

e)   Differentiate between variable levels and value labels in SPPS.   (4 marks)

f)   Explain five functions of statistics in data analysis   (10 marks)

QUESTION TWO (20MKS)

a)   Define what is a database. Give and explain 5 types of database.   (12 marks)

b)   What are the four requirements that must be met in construction of questionnaire.

                                                                                  (8 marks)

QUESTION 3 (20 MARKS)

a)   Differentiate between Absolute error and Relative error   (4 marks)

b)   Define and differentiate between Accuracy and Precision when it comes to measurements.

                                                                                  (4 marks)

c)   List and explain six advantages of questionnaire   (12 marks)

QUESTION 4 (20 MARKS)

a)   What are the six advantages of using STATA as a tool for data analysis   (12 marks)

b)   What are the four characteristics of a survey sample   (4 marks)

c)   List and explain research methods or studies based on design   (4 marks)

QUESTION 5 (20 MARKS)

a) Command line Interface (CLI) is a command in state. What are the three functions of (CLI)

(6 marks)

b) What are the three types of survey data analysis that are mostly related to quantative data.

(6 marks)

c) State three roles of a Computer Data bases.   (3 marks)

d) List 5 Data Analysis and Statistical Software Packages and explain them.   (5 marks)