KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATIONS, 2022/2023 ACADEMIC YEAR
END OF SEMESTER EXAMINATIONS
FOR THE DEGREE OF BACHELOR OF EDUCATION (ARTS)
KGE 2403-QUANTITATIVE TECHNIQUES AND COMPUTER AIDED ANALYSIS

Date: 14th December 2022
Time:2.30pm-4.30pm

INSTRUCTION TO CANDIDATES
ANSWER QUESTION ONE (COMPULSORY)AND ANY OTHER TWO QUESTIONS
QUESTION ONE (30 MARKS)

a) i) Define sampling and briefly discuss the factors that influence the decision to sample   [4 Marks]

   ii) Examine the **three** measurers of central tendency used in quantitative approach of the study   [6 Marks]

   iii) Briefly explain the benefits and problems related to computer-aided data analysis in qualitative research [4 Marks]

b)   i) Differentiate between quantitative and qualitative research hence explain **four** benefits of quantitative methods in Geography.   [5 Marks]

   ii) Once the research data is collected, describe the steps which tests of hypotheses will follow. [4 Marks]

c) i) What are the basic steps in data analysis?   [4 Marks]

   ii) Name **three** characteristics of data sheet.   [3 Marks]

QUESTION TWO   [20 MARKS]

Table 1 below presents data on contraceptive awareness and use as well as the resultant fertility levels in various districts in Kenya in 1989. Use the data to answer questions that follow.

Table 1: contraceptive use and fertility levels in various districts

District	% of women currently using contraceptives	Average number of children
Nairobi	88	3.3
Kiambu	75	4.3
Kitui	52	5.3
Kajiado	46	4.9
Bungoma	56	5.7
Nyeri	66	4.6
Embu	52	4.8
Meru	66	4.9

Isiolo	43	4.8
Kilifi	38	5
Kakamega	33	5.5

a) Formulate an appropriate null hypothesis which can be applied to these data   [4 Marks]

b) Use the Chi Square technique to test the hypothesis formulated at 0.05 significance level [6 Marks]

c) What conclusions can you derive from your findings   [4 Marks]

d) Explain **three** limitations of the Chi Square technique   [6 Marks]

QUESTION THREE [20 MARKS]

a) Discuss **two** relative advantages and **two** disadvantages of systematic sampling   [8 Marks]

b) Explain the following concepts

i) Measure of Central Tendency   [4 Marks]

ii) Mean Statistics   [4 Marks]

iii) Standard Deviation   [4 Marks]

QUESTION FOUR   [20 MARKS]

a) Two sets of geographers record the numbers of vehicles passing a key urban locality in 60 seconds at 9.00am and 4.00pm over the course of a week. The results obtained are: (i) 9.00pm (M=21, T=14, W=33, Th=19, F=5, S=1, Su=1) (ii) 4.00pm (M=38, T=19, W=41, Th=47, F=2, S=0, Su=3). Find the mean number of vehicles on Monday? [3 Marks]

b) Study the following data showing the age of primary school pupils at Kiriri-Tumaini Primary School and answer the question that follow; 15,8,7,6,12,5,14 and 13

i) Determine the range and median of the age of students.   [4 Marks]

ii) Calculate the standard deviation.   [4 Marks]

c) Discuss the need of studying a sample from a large population.   [4 Marks]

d)What is the importance of statistics in geography?   [5 Marks]

QUESTION FIVE [20 MARKS]

a) Discus **five** steps of a quantitative geographic research.   [10 Marks]

b) With examples, distinguish the types of hypothesis.   [6 Marks]

c) Explain **two** factors that influence a sample size of geographic data.   [4 Marks]