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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
FOURTH YEAR, SECOND SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF EDUCATION (ARTS)
KGE 2403: QUANTITATIVE TECHNIQUES AND COMPUTER AIDED DATA
ANALYSIS

Date: 6th December 2023
Time: 2.30pm-4.30pm

INSTRUCTIONS TO CANDIDATES:

Use sketches and diagrams wherever they serve to illustrate an answer

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Explain the meaning of the following concepts as used in statistics:
- i) Mutually exclusive events [3 Marks]
 - ii) Population [2 Marks]
 - iii) Sample [2 Marks]
 - iv) Probability [3 Marks]
- b) Examine the role of statistics in geographical studies. [6 Marks]
- c) Discuss the scales/levels of measurement. [5 Marks]
- d) Explore the need of studying a sample from a large population [3 Marks]
- e)
- i) State the benefits related to computer-aided data analysis in qualitative research [3 Marks]
 - ii) State the problems related to computer-aided data analysis in qualitative research [3 Marks]

QUESTION TWO (20 MARKS)

- a) The data below shows rainfall data (in mm) recorded in 26 weather stations in Kenya in the month of June 2021.

84, 77, 89, 77, 88, 81, 67, 74, 78, 94, 76, 77, 90, 28, 72, 93, 80, 94, 81, 58, 93, 56, 66, 79, 89, 77

Use the data to calculate the following:

- i) The mean. [3 Marks]
 - ii) The median. [2 Marks]
 - iii) The mode. [2 Marks]
 - iv) The range. [2 Marks]
 - v) The standard deviation. [5 Marks]
- b) Discuss the emerging trends and issues in quantitative techniques. [6 Marks]

QUESTION THREE (20 MARKS)

- a) Discuss **five** steps of a quantitative geographic research. [10 Marks]
- b) With examples, distinguish **three** different types of hypotheses. [6 Marks]
- c) Explain **two** factors that influence a sample size of geographic data. [4 Marks]

QUESTION FOUR (20 MARKS)

- a) Explain **two** factors that influence a sample size of geographic data. [4 Marks]
- b) Once the research data is collected, describe the steps which tests of hypotheses should follow. [6 Marks]
- c)
- i) What are the basic steps in data analysis? [6 Marks]
 - ii) Name **four** characteristics of data sheet. [4 Marks]

QUESTION FIVE (20 MARKS)

- a) Briefly distinguish between these geographical research concepts:
- i) Dependent and independent variable . [4 Marks]
 - ii) Null hypothesis and alternative hypothesis. [4 Marks]
 - iii) Questionnaire and focus group discussion. [4 Marks]
- b) Highlight the importance of descriptive statistics in geographic research. [6 Marks]
- c) State the most useful tests of significance for policy and political research. [2 Marks]
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