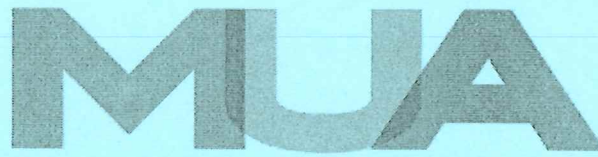


The
Management
University
of Africa



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UNDERGRADUATE UNIVERSITY EXAMINATIONS
SCHOOL OF MANAGEMENT AND LEADERSHIP
DEGREE OF BACHELOR OF EDUCATION ARTS

GEO 223: **TECHNIQUES IN GEOGRAPY III: STATISTICAL METHOD**
DATE **27TH JULY 2022**

DURATION: 2 HOURS
MAXIMUM MARKS: 70

INSTRUCTIONS

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** Carries **25 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

STATISTICAL METHOD

Statistical method in the study of geography disciplines, is a technique used by geography scholars in obtaining more accurate explanations of geographical phenomena. Such techniques overcome the traditional method of description. This technique can be used in other disciplines such as, cartography, survey, demography, satellite imagery among others. This helps obtain more accurate and detailed information acquired from large numerical data. The introduction of Geographical information systems (GIS) makes it more effective and appropriate to analyze, store, summarize and make better judgment and projections on events.

As applied in geographical studies, the student will encounter basic terms such as variables, level of measurement, and techniques of data presentation, correlation, and average among others.

REQUIRED

Surveyors in Nairobi County have been allocated a project to tarmac all earth roads in the county. Distances in Kilometers for each road are as follows:-

70	80	70	68	60
60	90	90	64	71
58	100	100	72	69
70	95	70	84	42
60	110	94	92	36

- Compute the mean, mode and median of the survey done **(9 marks)**
- Assemble the data in the form of grouped frequency distribution at the interval of ten. **(5 marks)**
- Design a histogram of the grouped frequency above **(6 marks)**
- Evaluate four relevances of statistical methods in geography studies **(4 marks)**
- Suggest any two reasons for using random techniques for data sampling collection **(1 mark)**

QUESTION TWO

- a) The ministry of planning and housing wish to start a housing project in Mavoko. They were to invite engineers and surveyors to start on ground work. Examine three types of survey techniques to be applied. (9 marks)
- b) Analyze the application of any three remote sensing technique in geography studies. (6 marks)

QUESTION THREE

- a) The use of maps for geographical studies is vital. Suggest any two survey techniques to be used to construct accurate educational maps. (4 marks)
- b) Evaluate any three statistical techniques used in the construction of maps. (3 marks)
- c) Analyse two reasons for the importance of leveling technique in finding sea level. (4 marks)
- d) Evaluate the application of satellite imagery in geographical studies (4 marks)

QUESTION FOUR

- a) Students at the Management University of Africa (MUA) are to carry out leveling in their premises. Analyse the relevance of any three leveling equipment. (9 marks)
- b) Analyse three errors that may occur in plane table survey. (6 marks)

QUESTION FIVE

- a) Government surveyors are to carry out a survey for the allocation of land to the landless in Ruai, Nairobi County. Propose any three data collecting techniques they would apply. (9 marks)
- b) Geographers use levels of measurement to identify data to be measured. Analyze any three levels of measurements used. (6 marks)

QUESTION SIX

- a) The outbreak of COVID-19 pandemic caused many deaths in some regions in Kenya than others. The government needed to carry out a research on number of deaths in Kiambu County. Analyze three appropriate sampling techniques to be used. (9 marks)

b) Give two reasons each for selecting the sampling techniques. (6 marks)