

KABARAK



UNIVERSITY

UNIVERSITY EXAMINATIONS

2010/2011 ACADEMIC YEAR

FOR THE DEGREE OF BACHELOR OF EDUCATION ARTS

COURSE CODE: GEO 211

COURSE TITLE: QUANTITATIVE METHOD IN GEOGRAPHY

STREAM: Y2S1

DAY: THURSDAY

TIME: 9.00 – 11.00 A.M.

DATE: 24/03/2011

INSTRUCTIONS:

1. Answer question **ONE (Q1)** compulsory
2. Answer any other **THREE (3)** questions

PLEASE TURN OVER

1. Briefly explain each pair of the following concepts:
 - a) Experiment and Hypothesis Testing (6Mrks)
 - b) Nominal and Ordinal scale (7Mrks)
 - c) Arithmetic mean and Standard deviation (6Mrks)
 - d) Sample and Sampling technique (6Mrks)

2. A Researcher carried out a study to find out the effect of maternal place of residence on the desired number of children by women in Kenya. The following observed frequency results were generated:

Desired number of children	Place of Residence		
	Urban	Rural	Total
1 - 3	14	4	18
4 - 6	20	23	43
7+	8	16	24
Total	42	43	85

Using X^2 test:

- a) Generate expected frequencies (6Mrks)
- b) Test the Null Hypothesis (H_0) that maternal place of residence does not affect fertility desires at 95% confidence level. (7Mrks)

3. a) What is sampling? (5Mrks)
- b) Make a case for or against Simple random sampling and Snowball sampling techniques (10Mrks)

4. Nine traffic police officers were chosen at random from an East African country and their weights were found to be as follows in Kilograms: 118, 120, 122, 125, 128, 130, and 139. In light of the above data, discuss the suggestion that all traffic police officers in this country is 120 kg at 95% confidence level (Use Student t-test statistical distribution) (15Mrks)

5. a) What is a normal distribution? (4Mrks)
- b) A group of geomorphologists from a local university collected a sample of 400 sand pebbles along Njoro River during a field study. They found that the distribution of the sizes of the pebbles was approximately normal with an average of 0.01 mm and a standard deviation of 0.001mm.
 - i) Represent the above information graphically (5Mrks)
 - ii) If the acceptable size of pebbles was 0.012mm, how many pebbles were below acceptable size? (6Mrks)

6. Weights of 100 university students from a local private university were taken, grouped and tabulated in a frequency table as follows:

Weight (kg)	Number of Students (f)
60-62	5
63-65	18
66-68	42
69-71	27
72-74	8

- a) Compute the mean and the median weights (5Mrks)
b) Calculate the standard deviation for the above data (5Mrks)
c) State the characteristics of statistical data (5Mrks)