MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016 Academic Year

SCHOOL OFHUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF SOCIAL SCIENCES

SECOND SEMESTER EXAMINATION FOR DEGREE IN BACHELOR OF EDUCATION (ARTS)

AGE 200: QUANTITATIVE AND QUALITATIVE TECHNIQUES

DATE: SCHOOL BASED **TIME:**

INSTRUCTIONS.

Answer Question One and any other TWO questions.

1. a) Explain the following concepts :
   - i. A variable (2 marks)
   - ii. Data (2 marks)
   - iii. Statistics (2 marks)
   - iv. Hypothesis (2 marks)
   - v. Confidence Level (2 marks)

   b) Distinguish between systematic and stratified sampling procedures. (4 marks)

   c) Assess the importance of sampling in geographic research. (8 marks)

   d) Explain the factors that must be put into consideration in the selection of a suitable statistical test for any given geographical data. (8 marks)

SECTION B

2. In a random sample test in a health center, the percentage of positive cases for malaria and AIDS were recorded as follows:

HEALTH CENTER					
DISEASE	1	2	3	4	5
Malaria	30	50	40	15	25
AID'S	10	25	12	18	15

a) State two hypotheses for the study (4 marks)

b) Compute expected frequencies for each disease type (4 marks)

c) Conduct a X^2 test at 0.05 level of significance for each type of disease. (5 marks)

3. Given the data: 22, 24, 81, 78, 59, 59, 59, 56, 22:

a) Determine the mean, mode and median (4 marks)

b) Discuss the usefulness of the mean as a measure of central tendency. (6 marks)

c) Compute the standard deviation of the data (10 marks)

4. a) Using appropriate illustrations, differentiate the following:

i. Continuous and discrete data (4 marks)

ii. Descriptive statistics and inferential statistics (4 marks)

b) Describe the properties of mean (2 marks)

c) Examine the significance of statistics in geographical studies (10 marks)

5. a) State the law of addition and multiplication in probability theory. (8 marks)

b) In a certain District in Kenya, the ratio of children born , girls to boys is 119: 96. Assuming that this birth ratio is to remain, what is the probability that the next child born will be:

i. A boy (4 marks)

ii. A girl or a by (4 marks)

iii. Twins (4 marks)