



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2011/2012
MOMBASA CAMPUS

**SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF ARTS
AND BACHELOR OF EDUCATION**

AGE 200: STATISTICS AND CARTOGRAPHY

DATE: Friday 30th March 2012

TIME: 2.00p.m -4.00p.m

INSTRUCTIONS:

Answer Question **one (Compulsory)** and any other **two** Questions

1. a) Explain the term probability [2marks]
b) With examples, distinguish between empirical and priori probabilities. [8marks]
c) Explain the following terms:
i) Elementary events [3marks]
ii) Mutually Exclusive events [3marks]
iii) Surrogates [3marks]
d) Calculate the scale of an aerial photograph where the ground is flat and mountainous given H as 1000m, h as 50m and f as 100mm. [6marks]
2. a) Describe three methods of scale change on maps. [6marks]
b) Explain any five elements of a base map considered in the compilation of thematic map. [10marks]
c) Discuss advantages of aerial photographs over ground photographs. [4marks]

3. a) Explain three aspects considered in the categorization of maps. [6marks]
b) Explain any four sources of data used in mapping. [8marks]
c) Describe the central limit theorem. [6marks]
4. a) With an example in each, distinguish between a null hypothesis and an alternative hypothesis. [6marks]
b) Discuss three factors that determine selection of a statistical test. [9marks]
c) Outline the steps in hypothesis testing for a T-Test. [5marks]
5. a) Distinguish among three types of probability distributions. [6marks]
b) Given an urn containing four red and six yellow marbles, find the probability of obtaining two red and two yellow marbles if four marbles are drawn one after the other. [8marks]
c) What is the probability of scoring ten or more with a throw of two dice. [6marks]