



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2014/2015

DIGITAL SCHOOL OF VIRTUAL AND OPEN LEARNING

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF
EDUCATION

ECE 800: STATISTICS

DATE:

TIME:

INSTRUCTIONS:

Answer question **ONE** and any other **TWO** questions.

1. You have just come from the field after collecting your data. Discuss in detail all the operations you would perform on this data, so as to be able to make relevant comparisons and data analysis. (30 marks)
2.
 - a) Briefly describe a hypothetical problem of study in early childhood, stating two null hypotheses and the respective alternative hypotheses. (10 marks)
 - b) We want to draw a simple random sample from a population of 4000 items. How large a sample should we draw if we desire to estimate the percent defective within a 2% of the true value with 95.45% probability? (10 marks)
3.
 - a) Explain the meaning of the following forms of reliability, showing how each can be established and explain when it is necessary for a researcher to establish each

- i) Inter-rater reliability
- ii) Test-retest reliability and
- iii) Parallel forms reliability

(15 marks)

- b) From a random sample of 36 civil service personnel, the mean age and the sample standard deviation were found to be 40 years and 4.5 years respectively. Construct a 95 percent confidence interval for the mean age of civil servants. (5 marks)

4. Using examples differentiate between the following using relevant examples:

- a) “Descriptive statistics” and “Inferential Statistics”. (5 marks)
- b) “Level of significance and level of confidence” (5 marks)
- c) “Parameters” and “Statistics” (5 marks)
- d) “One-tailed tests” and “Two-tailed tests” (5 marks)

5. a) Using relevant examples from a hypothetical study of your choice, distinguish between an “independent variable” and a “dependent variable”.

(5 marks)

- b) Explain the difference between “face validity” and “construct validity”.

(5 marks)

- c) What factors would you consider when determining the sample size in a study? Explain using examples. (10 marks)