CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELORS OF EDUCATION (ARTS)**

EPSC 123:   STATISTICAL METHODS IN EDUCATION

 STREAMS: BED (ARTS) Y1S2   **TIME: 2 HOURS**

DAY/DATE: FRIDAY 13/04/2018   **2.30 P.M - 4.30 P.M.**

INSTRUCTIONS:
- **Answer Question ONE (COMPULSORY) and any other TWO Questions.**
- **Do not write anything on the question paper**

QUESTION ONE
(a) Explain five factors that may influence the correlation coefficient.   [10 Marks]

(b) Discuss two ways in which the knowledge of statistics may help a teacher to understand the intellectual abilities of learners in a class.   [10 Marks]

(c) Describe the following concepts in relation to statistics;
   (i) Data   [2 Marks]
   (ii) Inferential statistics   [2 Marks]
   (iii)Population   [2 Marks]
   (iv)Sample   [2 Marks]
   (v) Variable   [2 Marks]

QUESTION TWO
(a) A researcher measures the number of errors on a statistics test and the candidate's levels of satisfaction with their performance. Data obtained were recorded in the table below

Number of errors	9	8	4	6	7	10	5
Satisfaction levels	3	2	8	5	4	2	7

Calculate the product moment correlation coefficient and interpret the results.   [10 Marks]

(b) The table below shows scores for ten students in Mathematics and English tests.

Mathematics	14	13	17	15	18	17	14	16	14	20
English	18	12	20	19	22	19	19	16	17	24

Test the hypothesis that there is no significant difference between the means of Mathematics and English scores given the critical value as 2.1 [10 Marks]

QUESTION THREE
Use data in the table below to answer the questions that follow

Class	14-25	26-35	36-45	46-55	56-65	66-75	76-85
Cumulative Frequency	3	10	20	29	36	44	50

Compute:
   (a) Frequency [1 Mark]
   (b) Median [4 Marks]
   (c) Mean [3 Marks]
   (d) Range [2 Marks]
   (e) Variance [5 Marks]
   (f) Standard deviation [2 Marks]

QUESTION FOUR
(a) Data below show test scores of students
(b)

Scores	15-19	20-24	25-29	30-34	35-39
Number of students	5	17	41	19	6

(a) Calculate the interquartile range. [10 Marks]
(b) Explain giving examples the steps involved in hypothesis testing. [10 Marks]
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