CHUKA  **UNIVERSITY**

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF EDUCATION

EPSC 123: STATISTICAL METHODS IN EDUCTAION

STREAMS: **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY 4/12/2019 **2.30 P.M – 4.30 P.M**

INSTRUCTIONS
Answer question one and any other two questions
Do not write on the question paper

1. (a) Explain briefly the meaning of the following terms:
   (i) Research
   (ii) Mean
   (iii) Sample
   (iv) Population
   (v) Range [10 marks]

   (b) Given the following distribution 93,72,44,43,62,51,70,84,70,73,63,85,40,65. [20 marks]

   Calculate
   (i) mean
   (ii) median
   (iii) Range
   (iv) interquartile range
   (v)Variance

2. (a) calculate spearman's rank correlation coefficient () for the following distribution. [12 marks]

Students score in English	Students score in writing
21	18
10	9
12	10
12	8
12	8
14	8
17	9
19	19
20	19

(b) Calculate the variance and standard deviation for the following distribution
62,22,43,29,60,66,30,43,62,10,82,73,69,29,66,60,27,55,25,73,27. [8 marks]

3. (a) An urn contains yellow, green and orange marbles. The probability of picking green marbles is 0.25 and the probability of picking green is 0.25 and the probability of picking of yellow marble is 0.15.

(i) What is the probability of picking orange marble.

(ii) What is the probability of picking orange or green marble.

(iii) What is the probability of picking orange and yellow or green marbles? [10 marks]

(b) Explain the meaning of positive and negative correlation. [2 marks]

(c) Discuss the measurement of scales used in correlation analysis. [8 marks]

4. (a) Present the following data into frequency distribution of a class interval 0-9. [8 marks]

53	50	60	65	70
50	40	84	54	96
30	54	83	40	80
40	53	29	61	73
24	83	95	94	46
30	30	53	42	34
60	50	35	10	63

56	54	54	59	85
60	50	50	28	90
55	50	34	27	50

(b) Construct a histogram using data in 4(a) above. [4 marks]

(c) Calculate;

(i) Mean

(ii) Mode

For the above grouped data in 4(a) above. [8 marks]
