

CHUKA**UNIVERSITY****UNIVERSITY EXAMINATIONS****FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF EDUCATION****EPSC 123: STATISTICAL METHODS IN EDUCATION****STREAMS: B.ED Y1S2****TIME: 2 HOURS****DAY/DATE: TUESDAY 07/08/2018****8.30 A.M. – 10.30 A.M.****INSTRUCTIONS:**

- **Do not write anything on the question paper.**
- **Answer questions ONE and TWO others.**

QUESTION ONE

- (a) Explain the importance of statistics in the following areas in an educational institution.
- (i) Evaluation of students' test scores. (5 marks)
- (ii) Management of students' record. (5 marks)
- (b) Describe any five characteristics of correlational coefficient. (10 marks)
- (c) Represent the following information on a histogram. (10 marks)

Age	10-19	20-29	30-39	40-49	50-59
Frequency	10	8	6	12	14

QUESTION TWO

The data below shows test scores of students.

English score	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90
Frequency	2	6	8	3	15	9	3	1

Determine:

- (a) Modal class (1 mark)
- (b) Median (5 marks)
- (c) Mean (4 marks)
- (d) Range (2 marks)
- (e) Variance (6 marks)
- (f) Standard deviation (2 marks)

QUESTION THREE

- (a) Determine the semi interquartile range of the data provided in the table below. (10 marks)

Mathematics score	51-60	61-70	71-80	81-90	91-100
Frequency	12	10	16	8	6

- (b) A researcher measures the number of errors on a statistics test and the candidates' levels of satisfaction with their performance. Calculate the product moment correction coefficient and interpret the results. (10 marks)

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

QUESTION FOUR

- (a) The data below shows scores of ten students in mathematics and English tests.

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

Test the hypothesis that there is no difference between the mean of mathematics and English scores given the critical value as 1.833. (10 marks)

- (b) Describe the five steps involved in hypothesis testing. (10 marks)
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