CHUKA UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF EDUCATION ARTS

EPSC 123: STATISTICAL METHODS IN EDUCATION

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

DAY/DATE: FRIDAY 26/03/2021 **8.30 A.M. – 10.30 A.M.**

INSTRUCTIONS:
- **(i) Answer question ONE and any other TWO**
- **(ii) Do not write on the question paper**

QUESTION ONE

(a) Elaborate any four factors that influence correlation coefficient [12 marks]

(b) Describe any three benefits of the knowledge of statistics to a teacher in a school set up. [9 marks]

(c) Explain the following types of statistics [9 marks]
- (i) Inferential
- (ii) Correlational
- (iii) Descriptive

QUESTION TWO

(a) Use the following data to construct a frequency distribution table using class intervals of 1 – 10, 11 – 20

48	46	59	63	99	88
55	72	81	76	66	47
64	52	70	79	59	51
83	65	60	71	77	73
79	46	91	54	43	62

[4 marks]

(b) Use the frequency distribution table to compute

- (i) Mode class [1 mark]
- (ii) Median [4 marks]
- (iii) Mean [3 marks]
- (iv) Variance [4 marks]
- (v) Standard deviation [2 marks]
- (vi) Range [2 marks]

QUESTION THREE

(a) Determine the interquartile range for data in the table below [10 marks]

Class	21-30	31-40	41-50	51-60	61-70
Frequency	2	8	11	6	3

(b) Two dice are tossed together. What is the probability that the product of the two upper faces will be

- (i) A least twenty four [3 marks]
- (ii) Greater than nine [3 marks]

(c) Distinguish between the following terms

- (i) Parameter and statistic [2 marks]
- (ii) Continuous variable and qualitative data [2 marks]

QUESTION FOUR

(a) The following are scores of eight students in music and English

Music	24	36	44	57	66	19	33	52
English	49	52	61	68	90	38	54	74

- (i) Compute the product moment correlation coefficient [8 marks]
- (ii) Interpret the results obtained [2 marks]

(b) The control and experimental groups in a research generated the following data. Test the hypothesis that there is no difference between the means of the two groups [10 marks]

Control group	64	59	45	39	78	94
Experimental group	32	46	78	47	52	90

The critical value is given as 2.015 at 0.05 significance level.
