

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF EDUCATION
MANAGEMENT**

EPSC 802: STATISTICAL METHODS

STREAMS: M.ED MANAGEMENT (PART TIME)

TIME: 2 HOURS

DAY/DATE: TUESDAY 04/12/2018

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS:

- **Answer question ONE and any other TWO questions.**
- **Do not write on the question paper.**

Q1. (a) Explain the meaning of the following terms used in educational statistics.

- (i) Multiple linear regression
- (ii) Correlation analysis
- (iii) Median
- (iv) Population (8 marks)

(b) (i) State the properties of correlation coefficient (r). (3 marks)

(ii) Describe factors that influence correlation coefficient (r). (5 marks)

(iii) Discuss TWO applications of correlation coefficient (r). (4 marks)

Q2. (a) The following scores were obtained from students in the two subjects, French and English.

French	58	44	29	62	60	44	80	59
English	41	66	42	75	72	35	62	78

Calculate the Spearman Rank Correlation Coefficient (r_s) and interpret the result.

(11 marks)

- (b) Calculate:
- (i) Range
 - (ii) Variance
 - (iii) Standard deviation,

For the following distribution.

20, 21, 15, 16, 20, 18, 20, 18, 16, 13, 11, 15, 20.

(9 marks)

Q3. The following scores were obtained by students at Chuka University

50	105	25	85	45	55	70	125
95	85	40	75	71	45	35	60
95	95	91	50	95	123	40	50
105	91	105	95	45	127	139	64
25	110	90	145	133	23	69	133

- (a) Construct a grouped frequency distribution with a class interval of 0-9, 10-19 e.t.c (4 marks)
- (b) Construct a histogram from the data in 3(a) above. (4 marks)
- (c) Calculate from 3(a)
- (i) Mean (4 marks)
 - (ii) Median (4 marks)
 - (iii) Mode (4 marks)

Q4. (a) The number of students at Kenyan public universities is estimated to be 235, 469 in number. What sample will you take at:

- (i) 99% confidence limit, with 75% of the target population having the characteristics of interest.
- (ii) 95% confidence limit with a maximum error of 0.01.
- (iii) 90% confidence limit (11 marks)

- (b) (i) Discuss the steps involved in the testing of a hypothesis. (5 marks)
- (ii) A researcher needs to be familiar with measurement of scales before undertaking correlation analysis. Discuss two scale used in correlation analysis.

(4 marks)
