



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
FOURTH YEAR SECOND SEMESTER**

**SCHOOL OF EDUCATION
BACHELOR OF EDUCATION**

COURSE CODE: PSY 4107

**COURSE TITLE: EDUCATIONAL STATISTICS,
MEASUREMENT AND EVALUATION**

DATE: 26/4/2019

TIME: 14:30 – 16:30 PM

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO questions

This paper consists of 3 printed pages. Please turn over.

QUESTION ONE (COMPULSORY)

(a) Explain the following terms as used in measurement and evaluation

- i) Summative evaluation
- ii) Test
- iii) A Statistic
- iv) Parametric
- v) Item analysis

(10 marks)

(b) Given the following distribution of scores obtained from a Form III Kiswahili test:

20	16	25	24	31	28	16	27	33
31	30	26	18	23	27	22	22	24
14	19	23	23	20	25	21	19	21

- i) Calculate mode, median, mean, range, variance and standard deviation **(8 marks)**
- ii) Using the measures of central tendency found in b(i) above, describe the shape of the distribution of scores and performance of students on the test **(2 marks)**
- (c) Identify TWO uses of table of specifications in test construction **(2 marks)**
- (d) Explain FOUR purposes of educational evaluation **(8 marks)**

QUESTION TWO

- a) Explain FIVE qualities and skills a teacher should possess to be a successful item constructor **(10 marks)**
- b) In a biology test, the mean score was 48 and the standard deviation was 5 for a group of 100 form II students.
 - i) How many students scored above 43 marks **(5 marks)**
 - ii) If 90% of the students were to be selected using these scores, what will be the cut-off marks for them to be selected **(5 marks)**

QUESTION THREE

- (a) Explain the test-retest method of estimating reliability of a test **(10 marks)**
- (b) Identify FIVE factors that determine the choice of item format (or type) a teacher will use in making a classroom test **(10 marks)**

QUESTION FOUR

- a) Using examples, explain FOUR levels of measurements **(8 marks)**
- b) (i) Differentiate between item difficulty and item discrimination **(4 marks)**
(ii) The table below gives a summary of students' performance on a multiple choice item/question

	A	B	C*	D	E
Upper group (Ru)	0	0	20	0	0
Lower group (Rl)	4	2	8	3	3

C*- was the correct answer

- Calculate item difficulty index and item discrimination index for the item **(6 marks)**
- (iii) Comment on the quality of the item **(2 marks)**

QUESTION FIVE

- (a) Explain FIVE steps considered in preparation and construction of a classroom test **(10 marks)**
- (b) The following scores were obtained when a group of ten (10) Form IV students were tested in chemistry and mathematics

Students	A	B	C	D	E	F	G	H	I	J
Chemistry	14	14	16	16	18	18	20	20	22	22
Mathematics	14	15	15	16	16	17	17	18	18	19

- i) Compute Pearson Product Moment Correlation Coefficient for the two sets of scores **(8 marks)**
- ii) Interpret the correlation coefficient value obtained in (i) above and comment on the results **(2 marks)**

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