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 –**

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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