MACHAKOS UNIVERSITY

University Examinations 2021/2022 Academic Year

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATION PSYCHOLOGY & SNE

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION (ARTS) (ENGLISH /LITERATURE)

BACHELOR OF EDUCATION (SPECIAL NEEDS EDUCATION)

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF EDUCATION (ARTS)

EPS 400: EDUCATIONAL TESTING & MEASUREMENT

DATE: 23/8/2022   **TIME: 8.30-10.30 AM**

INSTRUCTIONS

Answer Question ONE and any other TWO questions

QUESTION ONE (30 MARKS) COMPULSORY

a)   Describe each of the two different types of test classification by item format that are used in class tests   (10 marks)

b)   Differentiate between each of the following pairs of terms

   i.   Measures of central tendency and Measures of variability

   ii.   A sample and a population

   iii.   Unimodal distribution and bimodal distribution

   iv.   Frequency distribution table and a Histogram

   v.   Reliability and Validity of a test   (10 marks)

c)   State the scale (level) of measurement and type of variable (continuous or discrete) for each of the following.

   i.   The positions of learners in an end of term examinations

   ii.   The scores of form one students in a mathematics test

   iii.   Classification of students by hostels of residence

   iv.   Classification of graduates into First Cass, Second Class, Pass, Fail.

   v.   Heights of the students in a form two class   (10 marks)

QUESTION TWO (20 MARKS)

a)   Discuss **four** purposes of tests and measurements as used in a school situation   (8 marks)

b)   The following table shows a sample of scores obtained on a Form Two English test:

Scores	4	5	6	7	8	9
Frequency	6	7	12	15	6	4

Using the information above, determine the

i.   Mode   (2 marks)

ii.   Median   (4 marks)

iii.   Arithmetic Mean   (4 marks)

iv.   Using the results in (i), (ii) and (iii) above, describe the distribution   (2 marks)

QUESTION THREE (20 MARKS)

a)   Outline four properties of a Normal Curve   (4 marks)

b)   The table below shows a summary of students' responses on a multiple-choice item.

Item							
1	Options	A*	B	C	D	OMIT	TOTAL
	Upper group	32	4	2	2	0	40
	Lower group	12	12	10	6	0	40

A* Is the key (Correct option)

Determine the

i.   Difficulty index (P) of the item   (2 marks)

ii.   Discrimination index (D) of the item   (2 marks)

iii.   Using the results in(i) and (ii), commend on the quality of the item   (2 marks)

c)   Explain five factors that influence the selection of item format that a teacher may use in a class test   (10 marks)

QUESTION FOUR (20 MARKS)

a)   The following information shows the performance of a student in three subjects

Subject	mean	s.d	score	number of students
Mathematics	75.4	6.3	78.2	100
Physics	85.6	4.1	83.4	108
Biology	88.2	3.5	89.2	120

In relation to other examinees determine the subject the student performed

i.   Poorest

ii.   Best   (5 marks)

b)   Outline five factors that influence the reliability of a test   (5 marks)

c)   Explain how each of the factors in (b) above may influence the reliability of a test (10 marks)

QUESTION FIVE (20 MARKS)

a)   Explain the difference between the following sets of terms:

i.   Percentile ranks and Standard scores

ii.   Achievement test and performance test

iii.   Test-retest and parallel form methods of estimating reliability

iv.   Content validity and predictive validity

v.   Norm-Referenced tests and Criterion- referenced tests   (10 marks)

b)   Discuss five roles that the Kenya Certificate of Secondary Education (K.C.S.E.) Examination plays in the Kenya system of education.

        (10 marks)