



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY & SPECIAL NEEDS

EDUCATION

**FOURTH YEAR FIRST SEMESTER EXAMINATION FOR
BACHELOR OF EDUCATION (SPECIAL NEEDS EDUCATION)**

BACHELOR OF EDUCATION (ENGLISH/LITERATURE)

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF EDUCATION (ARTS)

EPS 400: EDUCATIONAL TESTING AND MEASUREMENT

DATE: 11/8/2021

TIME: 8.30-10.30 AM

INSTRUCTIONS

Answer question **ONE** and any other **TWO** questions

SECTION A (COMPULSORY)

QUESTION ONE (30 MARKS)

- a) Differentiate between each of the following pairs of terms:
- i. Positively skewed and Negatively skewed distributions
 - ii. A sample and a population
 - iii. Inferential and Descriptive statistics
 - iv. Percentile ranks and Standard Scores
 - v. Content validity and Predictive validity (10 marks)
- b) 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 two students in a mathematics test
 - iii. Classification of students by hostels of residence
 - iv. Age of workers in a factory
 - vi. Classification of graduants into First Cass, Second Class, Pass, Fail.
(10 marks)
- c) A test is only as good as the items it contains. Discuss the various aspects to consider to ensure that test items are of good quality (10 marks)

SECTION B (ANSWER ANY TWO QUESTIONS)

QUESTION TWO (20 MARKS)

- a) Item analysis results showed that 126 out of 160 students in the upper group answered an item correctly and 86 out of 160 students in the lower group answered the same item correctly.
- i. Determine the difficulty index (p) for the item
 - ii. Comment on the quality of the item based on the above information.
(4 marks)
- b) Explain the effect of each of the following on the quality of a test.
- i. use of test specifications table;
 - ii. Small or large number of test items in a test;
 - iii. Mixing difficulty, moderate, and easy items in an appropriate proportion during test development process. (6 marks)
- c) Describe each of the different types of test **formats** that may be used in class tests (10 marks)

QUESTION THREE (20 MARKS)

The following scores were obtained by 30 Form one students in an English test:

46	31	18	39	40	38
37	19	15	26	14	37
24	41	18	19	21	25
31	10	20	21	32	46
20	30	32	27	31	37

- a) Prepare a grouped frequency distribution table using a class interval of five units and starting with 10-14 as the lowest group. (3 marks)
- b) Using the frequency table in (a) above
 - i. Draw a histogram. (4 marks)
 - ii. Use the histogram to determine the mode score. (2 marks)
 - iii. Draw an Ogive. (4 marks)
 - iv. Use the Ogive to determine the median score. (2 marks)
- c) Calculate the arithmetic mean for the distribution. (3 marks)
- d) Describe fully the shape of the distribution using your results in b (ii, iv and c) above. (2 marks)

QUESTION FOUR (20 MARKS)

- a)
 - i. Define the meaning of the term 'reliability of test'. (1 mark)
 - ii. Describe the three commonly used methods of estimating reliability coefficient of tests. (9 marks)
- b) Discuss five challenges affecting examinations administration during the Covid-19 Pandemic. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss **five** uses of tests citing one example in each area. (10 marks)
- b) Assess five factors to consider when selecting a test format to use when developing tests for learners. (10 marks)