



MACHAKOS UNIVERSITY

University Examinations 2016/2017

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY, SPECIAL NEEDS
EDUCATION AND EARLY CHILDHOOD EDUCATION

FOURTH YEAR APRIL SESSION EXAMINATION FOR BACHELOR OF
EDUCATION

EPS 400: EDUCATIONAL TESTING AND MEASUREMENT

DATE: SCHOOLBASED

TIME:

INSTRUCTIONS

Answer Question One and Any Other Two Questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Classify each of the following as nominal, ordinal, interval or ratio level of measurement:
- i Height of students in a form two class.
 - ii Proficiency in English graded into categories of excellent, very good, good, fair, poor.
 - iii The score obtained in a statistics test.
 - iv The weight of each of the workers at Machakos University.
 - v Classification of students by hostels of residence in boarding schools. (5 marks)
- b) Distinguish between the following terms :
- i Positively skewed distributions and negatively skewed distributions;
 - ii A sample and a Population;
 - iii Inferential statistics and descriptive statistics;
 - iv An Ogive curve and a frequency table;
 - v Unimodal distribution and bimodal distribution. (10 marks)

- c) i Explain two differences between norm-referenced and criterion-referenced tests. (4 marks)
- ii Outline two advantages and two disadvantages of the essay tests (4 marks)
- d) Item analysis results showed that 53 out of 60 students in the upper group answered an item correctly and 23 out of 60 students in the lower group answered it correctly. Comment on the quality of the item based on the above information. (7 marks)

QUESTION TWO (20 MARKS)

- a) Differentiate between the following terms as used in tests and measurements:
 - i Measurement and evaluation;
 - ii Achievement and aptitude test;
 - iii Formative and summative evaluation;
 - iv Concurrent validity and predictive validity;
 - v Test-retest and split-half methods of estimating reliability. (10 marks)
- b) Explain two ways that each of the following stake holders may benefit from the teaching and learning situation:
 - i Educational administrators;
 - ii Students;
 - iii Teachers;
 - iv Guidance and Counselors in schools;
 - v Parents. (10 marks)

QUESTION THREE (20 MARKS)

- a) The data below shows a sample of scores obtained on a form one Mathematics test:

25, 15, 18, 31, 20, 18, 22, 18, 16, 15, 14, 23, 17, 28, 20, 22, 20, 19, 21, 18.

Compute the following:

- i) Mode (1 mark)
- ii) Median (2 marks)
- iii) Mean. (2 marks)
- iv) Range (1 marks)
- v) Mean deviation; (3 marks)
- vi) Standard deviation. (3 marks)

- b) Using the measures of central tendency obtained in (i) to (iii) above, describe fully:
- i) The shape of the distribution; (4 marks)
 - ii) The performance of the students in the test. (4 marks)

QUESTION FOUR (20 MARKS)

- a) State four factors that may affect the choice of an item format (or question type) in your class test. (4 marks)
- b) Explain the importance of the following
- i) Graphical presentation of data;
 - ii) Tabulation of data (4 marks)
- c) Explain the effect of each of the following on the quality of a test item
- 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 when preparing a test. (12 marks)

QUESTION FIVE (20 MARKS)

- a) Explain the term 'report form' as used in teaching and learning.
- b) Explain the importance of a report form to the following:
- i Student (2 marks)
 - ii Teacher (2 marks)
 - iii Parent (2 marks)
- c) Discuss six functions of Kenya Certificate of Secondary Education. (12 marks)