



MACHAKOS UNIVERSITY

University Examinations 2019/2020 academic year

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY, SPECIAL NEEDS EDUCATION

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION

EPS 400: EDUCATIONAL TESTING & MEASUREMENT

DATE: 3/12/2019

TIME: 8.30-10.30 AM

INSTRUCTIONS

Answer Question One and Any Other Two Questions

QUESTION ONE (30 MARKS)

- a) State the scale (level) of measurement and the type of variable (continuous or discrete) for each of the following:
- Age of students in a form two class.
 - Ranking of performance of schools after they have been designated as excellent, best, satisfactory and worst.
 - Classification of job applicants by counties.
 - Assigning of numbers to represent variables in a research.
 - Total number of students in fourth year of study at Machakos University.
- b) Discuss how the following factors affect reliability of a test
- Speed
 - Test difficulty
 - Group homogeneity
 - Test length
 - Subjective scoring (10 marks)
- c) Distinguish between the following terms:
- Evaluation and measurement

- ii. Standard scores and percentile ranks.
- iii. Measures of variability and measures of relationship.
- iv. Descriptive and Inferential statistics
- v. Test and Examination (10 marks)

QUESTION TWO (20 MARKS)

The following data shows the scores obtained from form one biology test.

28,25,23,25,28,30,24,28,32,26,33,27,31,27,31,22,30,32,30,28,.

Compute the following measures of:

- a) Central tendency
 - i. Mode (2 marks)
 - ii. Median (2 marks)
 - iii. Arithmetic mean (4 marks)
- b) Variability
 - i. Range (2 marks)
 - ii. Mean deviation (4 marks)
 - iii. Standard deviation (4 marks)
- c) Using the results in (a) above, describe the shape of the distribution. (2 marks)

QUESTION THREE (20 MARKS)

- a) Explain five factors that may affect the choice of an item format (or question type) to use in class tests. (10 marks)
- b) Distinguish between the following sets of terms:
 - i. Test reliability and test validity.
 - ii. Test-retest and Parallel form methods of estimating reliability of a test.
 - iii. Norm-referenced and criterion-referenced testing.
 - iv. Essay type of tests and objective type of tests.
 - v. Positively skewed distribution and negatively skewed distribution. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Explain two purposes of tests and measurements to each of the following:
- i. Teacher; (4 marks)
 - ii. Learner; (4 marks)
 - iii. Administration. (4 marks)
- b) Explain four roles of evaluation in education. (4 marks)
- c) Differentiate between formative and summative evaluation, citing an example in each. (4 marks)

QUESTION FIVE (20 MARKS)

- a) Describe each of the different types of test formats that may be used in class tests (10 marks)
- b) The table below shows a summary of students' responses in a multiple choice item (or question).

Options	A	B	C	D*	Omits	
Upper group	4	0	6	50	0	60
Lower group	35	0	2	23	0	60

D* is the key (correct answer)

- i. Calculate the
 - 1. Item difficulty index (P) (2 marks)
 - 2. Item discrimination index (D) (2 marks)
- ii. Comment on the quality of the item in relation to the item analysis data obtained in (i) above. (2 marks)
- iii. Comment on the quality of each distractor (4 marks)