



MACHAKOS UNIVERSITY

University Examinations for 2024/2025 Academic Year

**SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND SPECIAL NEEDS
EDUCATION**

**FOURTH YEAR FIRST SEMESTER EXAMINATION FOR DEGREE IN
BACHELOR OF EDUCATION (SPECIAL NEEDS)
BACHELOR OF EDUCATION (SCIENCE)
BACHELOR OF EDUCATION (ARTS)**

EPS 400: EDUCATIONAL TESTING AND MEASUREMENT

DATE: 16TH JANUARY, 2025

TIME: 2.00 PM – 4.00 PM

INSTRUCTIONS:

*Answer question **ONE** (Compulsory) and any other **TWO** questions*

QUESTION ONE (30 MARKS)

- a) Differentiate between the following terms:
- i) Achievement test and aptitude test
 - ii) Sample and population
 - iii) Test validity and test reliability
 - iv) Test-retest and Parallel-Form methods of estimating reliability.
 - v) Measures of variability and measures of relationship. (10 Marks)
- b) State the scale (or level) of measurement and the type of variable (continuous or discrete) in each of the following measures:
- i) Age of students in a form two class.
 - ii) Ranking of performance of schools after they have been designated as excellent, best, satisfactory and worst.
 - iii) Classification of job applicants by counties.
 - iv) Assigning of numbers to represent variables in a research.
 - v) Total number of students in fourth year of study at Machakos University. (10 Marks)
- c) Discuss the three criteria used when evaluating the quality of test items. (10 Marks)

QUESTION TWO (20 MARKS)

- a) Explain the following terms as used in measures of central tendency;
- i) Mode
 - ii) Median
 - iii) Arithmetic mean (6 Marks)
- b) The following frequency distribution table shows the scores of students on a form 2 English test.

Score	3	8	13	18	23	28	33	38
Frequency	1	2	3	5	9	20	8	2

Using the information above, compute the following measures of:

- i. Central tendency;
 - Mode (1 Marks)
 - Median (2 Marks)
 - Mean (4 Marks)
- ii. Variability
 - Range (1 Marks)
 - Mean deviation (4 Marks)
- iii. Using the results in (i) above, describe the distribution (2 Marks)

QUESTION THREE (20 MARKS)

- a) Explain two uses of a report form (or card) to each of the following:
- i) Pupil
 - ii) Teachers (4 Marks)
- b) Describe each of the different types of test classification by test format that may be used in class tests (16 Marks)

QUESTION FOUR (20 MARKS)

- a) Citing relevant examples, discuss the effect of the following factors on the reliability of a test (10 Marks)
- i. Speed/Power
 - ii. Difficulty of test items
 - iii. Group homogeneity
 - iv. Test length

v. Objectivity

- b) The following table gives a summary of examinee's response on a multiple choice item (or question)

		Options	A	B	C	D	OMIT	TOTAL
		Upper group	6	3	3	24	0	36
		Lower group	5	3	12	16	0	36

D* is the key (correct answer)

- Calculate the difficulty index of the item
 - Calculate the discrimination index of the item
 - Comment on the quality of the item using your results in i and ii
 - Examine each of the distractors and comment
- (10 Marks)

QUESTION FIVE (20 MARKS)

- Outline four characteristics of a normal curve. (4 Marks)
- Citing relevant examples, differentiate between formative evaluation and summative evaluation. (4 Marks)
- Explain two purposes of tests and measurements to each of the following in a school:
 - Teacher
 - Learner
 - Administration(12 Marks)