



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY & SNE

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION

EPS 400: EDUCATIONAL TESTING AND MEASUREMENT

SCHOOLNBASD

DATE:

TIME:

INSTRUCTIONS: Answer Question One and Any Other Two

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Distinguish between each of the following terms
- (i) Reliability and Validity of a test
 - (ii) Informal test and aptitude test
 - (iii) Speed test and power test
 - (iv) Measures of central tendency and measures of variability
 - (v) Norm-referenced and a criterion-referenced test (10 marks)
- b) Classify each of the following as nominal, ordinal, interval or ratio level of measurement and state whether continuous or discrete variable
- i) Numbers assigned to players of different departments.
 - ii) Proficiency in language graded into categories of good, fair, poor.
 - iii) The score you obtained in a statistics test.
 - iv) The weights of the workers in Machakos University.
 - v) The ranking of secondary schools after they have been designated as Excellent, Best, Satisfactory, and Worst in KCSE Examination performance (10 marks)

- c) Discuss two purposes of tests and measurements in a school situation to each of the following stakeholders (10 marks)
- i) Teacher
 - ii) Student
 - iii) Administration
 - iv) Guidance and Counsellor
 - v) Parent

QUESTION TWO (20 MARKS)

- a) Explain five factors that influence the selection of item format that teachers use in class tests (10 marks)
- b) State five characteristics of the Normal Curve. (5 marks)
- c) Outline five factors that influence the reliability of a test (5 marks)
- d) Explain how each of the factors in (c) above influence the reliability of a test. (10 marks)

QUESTION THREE (20 MARKS)

- a) Explain the difference between the following sets of terms;
- i) Summative and Formative evaluation
 - ii) Achievement test and performance test
 - iii) Test-retest and parallel form methods of estimating reliability of tests
 - iv) Content validity and construct validity
 - v) Item Difficulty and Item Discrimination of test items (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)

QUESTION FOUR (20 MARKS)

- a) Expound five challenges encountered in the administration of national examinations in Kenya (10 marks)
- b) Explain five strategies that may be employed to counter these challenges in (a) above (10 marks)

QUESTION FIVE (20 MARKS)

The following data shows a sample of marks scored by form two students on a Biology test:

49, 63, 59, 44, 49, 51, 62, 37, 30, 49, 45, 52, 50, 42, 54, 32, 57

41, 42, 56, 44, 46, 63, 44, 40, 50, 46, 53, 48, 37, 46, 53, 68, 36

40, 56, 37, 66, 43, 40, 51, 59, 42, 52, 46, 57, 43

- a) Prepare a frequency distribution table for **ungrouped** data having the following columns; scores, tally, frequency and cumulative frequency. (8 marks)
- b) Using the frequency table in (a) above, determine the:
 - i) arithmetic mean; (5 marks)
 - ii) median score; (2 marks)
 - iii) Mode score (2 marks)
- c) Using the results in (b) above, describe the shape of the distribution of the scores. (3 marks)