

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATION COUNCIL OF TANZANIA
DIPLOMA IN SECONDARY EDUCATION EXAMINATION**

762

**EDUCATIONAL RESEARCH, MEASUREMENT AND
EVALUATION**

Time: 3 Hours.

Tuesday, 11th May 2004 a.m

Instructions

1. This paper consists of sections A, B and C.
2. Answer **all** questions in sections A, **two (2)** questions from section B and **one (1)** question from section C.
3. Question **11** is **compulsory**.
4. Section A carries 36 marks, section B carries 40 marks and section C carries 24 marks
5. Cellular phones and unauthorized materials are **not allowed** in the examination room.
6. Write your **Examination Number** on every page of your answer booklet(s).

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SECTION A (36 marks)

Answer all questions in this section.

1. Define the term measurement in the context of education.
2. Mention four differences between qualitative and quantitative research approaches.
3. State four factors that can influence the validity of a test.
4. Give four purposes of setting clear research objectives in an educational study.
5. List three limitations of using achievement tests as the sole measure of learning outcomes.
6. State four characteristics of a well-constructed questionnaire.
7. Mention four roles of educational statistics in policy formulation.
8. Explain four functions of pilot studies in educational research.
9. Give two reasons why the mode might be preferred over the mean in certain educational data analyses.

SECTION B (40 marks)

Answer two questions from this section. Question 11 is compulsory.

10. (a) Define the term criterion-related validity.
(b) Differentiate between concurrent validity and predictive validity, giving one example for each.
11. (a) The table below shows the Chemistry test scores of 15 students:
42, 48, 56, 60, 65, 68, 72, 75, 78, 80, 83, 85, 88, 90, 94.
(i) Calculate the mean score (nearest whole number).
(ii) Calculate the variance and standard deviation (nearest whole number).
(iii) Using a mean of 70 and a standard deviation of 12, calculate the z-scores for the highest and lowest marks.
(b) Explain three reasons why standard deviation is considered a more informative measure of spread than range.

12. A researcher is investigating the impact of teacher motivation on student performance in rural secondary schools.
- (a) State one general objective and three specific objectives for the study.
 - (b) Discuss four challenges the researcher is likely to face in collecting data and explain how each challenge could be overcome.
13. Discuss four limitations of using mean as a measure of central tendency in educational research and suggest ways of addressing each limitation.

SECTION C (24 marks)

Answer one question from this section.

14. A newly designed aptitude test for secondary school admissions has produced inconsistent results across different schools.
- (a) Suggest four possible reasons for the inconsistency.
 - (b) Propose four strategies that could improve the reliability of the test.
15. Large-scale national assessments often face criticism for their impact on teaching and learning. Examine four positive and four negative effects of implementing high-stakes assessments in Tanzania.
16. Critically analyze four ethical issues that can arise when using human subjects in experimental educational research, and suggest practical measures to address each.