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, 14ᵗʰ May 2002 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).

SECTION A (36 marks)

Answer **all** questions in this section.

1. Define the term validity in educational measurement.

2. Mention four characteristics of a good research problem.

3. State four advantages of using stratified random sampling in educational research.

4. Give four limitations of using observation as a research method.

5. List three functions of educational assessment in the learning process.

6. State four qualities of a standardized test.

7. Mention four ways of improving the reliability of an achievement test.

8. Explain four purposes of administering a pilot study before the main research.

9. Give two reasons why range is considered a weaker measure of variability compared to standard deviation.

SECTION B (40 marks)

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

10. (a) Define face validity and content validity.

   (b) Explain four differences between the two, with examples.

11. (a) The following are Mathematics scores for 16 students:

   40, 45, 48, 50, 52, 55, 58, 60, 62, 65, 68, 70, 72, 75, 78, 80.

   (i) Calculate the mean score (nearest whole number).

   (ii) Calculate the variance and standard deviation (nearest whole number).

   (iii) Using a mean of 65 and a standard deviation of 12, compute the z-scores for the highest and lowest

   scores.

   (iv) Interpret the two z-scores in the context of performance.

   (b) State three advantages of using z-scores when reporting examination results.

12. A study is being conducted to examine the relationship between students' study habits and academic performance in Tanzanian secondary schools.

    (a) State one general objective and three specific objectives for this study.

    (b) Identify four possible sources of bias in this study and explain how each can be minimized.

13. Explain four factors that a researcher should consider when deciding on the appropriate sample size for an educational research study.

SECTION C (24 marks)

Answer one question from this section.

14. A newly developed national examination has produced significantly different results when administered in urban and rural schools.

    (a) Suggest four possible reasons for the discrepancy.

    (b) Propose four strategies to ensure fairness in future administrations.

15. Discuss four advantages and four disadvantages of using high-stakes testing in the Tanzanian education system.

16. Examine four ethical issues that may arise when collecting data from minors in educational research, and suggest measures to address each.