UNIVERSITY OF SWAZILAND

FACULTY OF EDUCATION

DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND MANAGEMENT

MAY, 2017

FINAL EXAMINATION PAPER

COURSE CODE	: EDF 321
TITLE OF PAPER	: MEASUREMENT AND TESTING
TIME ALLOWED	: THREE (3) HOURS
INSTRUCTION	: THIS QUESTION PAPER HAS 3 PRINTED PAGES SECTION A, ANSWER ALL QUESTIONS SECTION B. ANSWER ANY TWO QUESTIONS
SPECIAL CONDITION	: SCIENTIFIC CALCULATOR ARE NEEDED
MARKS ALLOCATED	: 100 MARKS

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION TO DO SO HAS BEEN GRANTED BY THE INVIGILATOR

SECTION A

An institution intends to introduce a new course with the subject combination of ICT and Maths. As a consultant you were given a sample of six scores for students selected from the class that was given the two tests; one in ICT and the other in Maths. Answer the following in order to give advice to the institution about the proposed new subject combination.

Students	A	B	C	D	E
ICT	7	11	15	12	14
Maths	8	13	12	11	15

1. What is a sample
    A. A representative sub-set of a population
    B. Accessible participants in a research study
    C. Target people with information about the research study
    D. Organised groups of participants
2. Which method of sampling could have been most appropriate to use to select the six (6) students?
    A. Purposive sampling
    B. Stratified sampling
    C. Random sampling
    D. Convenience sampling
3. Reflect on the term correlation
    A. The causal relationship between two variables
    B. The proportion of variance that two variables share
    C. The association between two variables
    D. statistical method that can only be used with a correlational research design
4. Which method of determining reliability has been used in this scenario?
    A. Test-retest method
    B. Split-half method
    C. Inter-ratter method
    D. Alternative-form method
5. This method establishes which correlation co-efficient?
    A. co-efficient of stability
    B. co-efficient of equivalence
    C. co-efficient of internal consistence
    D. co-efficient of strength
6. Make a null hypothesis about the new proposed subject combination of the institution.
    A. There is no significant difference between the two subjects
    B. There exist a significant difference between the two subjects
    C. Performance in one subject cannot be used to predict the other
    D. Performance in one subject can be used to predict the other

7. Briefly describe the method that has been used in this scenario. (5 marks)
8. Showing all your working, use the Pearson Product Moment Correlational Co-efficient (PPMCC) to compute the correlation co-efficient between the two subjects.

$$r = \frac{n(\sum xy) - (\sum x).(\sum y)}{\sqrt{[n(\sum x^2)-(\sum x)^2].[n(\sum y^2)-(\sum y)^2]}}$$

(15 marks)

9. Interpret the calculated correlation coefficient (5 marks)
10. Sketch a scatter diagram showing the students' performance between the two subjects. (5 marks)
11. Make your conclusion about the new proposed subject combination. (5 marks)

Total marks [40 marks]

SECTION B

QUESTION 1

As a class teacher, one of your responsibilities is assessing learners through assignments, tests, examinations etc. Discuss any three (3) points on each to of the following to demonstrate how you would ensure that assessment instruments credible in terms of:

a) Validity
b) Reliability
c) Usability (3 x 10 = 30 marks)

Total marks [30 marks]

QUESTION 2

a) Write a behavioural instructional objective in the area of your specialisation and identify and list the five (5) characteristics of a well written instructional objective. (10 marks)
b) Discuss through classroom examples any **four (4)** values of using behavioural objectives in the teaching and learning. (4 x 5 = 20 marks)

Total marks [30 marks]

QUESTION 3

Write brief explanatory notes about the following **statistical concepts**, use classroom examples to support your argument where applicable.

a) Mean
b) Standard deviation
c) Range

(3 x 10 = 30 marks)

Total marks [30 marks]

THE END OF PAPER