



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SCHOOL OF EDUCATION
MAY/JUNE 2012 EXAMINATION

EDU 721 EDUCATIONAL STATISTICS (3 CR)
TIME ALLOWED: 3 Hours

Instructions: Answer questions number one (1) and any other three (3) questions. Use the answer booklet provided

1a. With the aid of appropriate concept map diagram only, illustrate the relationship between the following concepts:

Variables, Discrete data, Continuous data, Ordinal data, Ratio data, Interval data, Nominal data, Parametric and Non-Parametric.

b. Two examiners are likely to award different scores to an examinee on same question even when the teachers use the same marking scheme. The difference is usually attributed to error of measurement.

State, with at least one example, the three possible causes of this type of error in educational measurement.

c. Copy and complete the table below:

S/ No	Characteristics Sample/Variable	of	Appropriate Test
1.	(i)		t-test of independent samples
2.	(ii)		t-test of non-independent samples
3.	If N is more than 30 for a post test only and randomly sampled objects.		(iii)
4.	(iv)		ANOVA
5.	If two or more independent variables are involved		(v)
6.	If pretest, post-test design		(vi)
7.	If more than two groups are involved in a pretest, post-test, with two or more variables		(vii)
8.	(viii)		Chi-square

1d. What is a variable? Give atleast one example of a variable.
(25 marks)

2. The table below shows the frequency distribution of students offering some subjects in May/June 2012

Semester Examination in NOUN. Complete the table and use it to construct a pie chart.

Subject	Mat hs	Engli sh	Physi cs	Chemis try	Geograp hy	Agr ic	Biolo gy	Tot al
Freque ncy	15	30	90	45	150	108	102	
Degree								

(15 marks)

3a. A farmer hired the services of two labourers to help him in his farm. What is the probability that the first labourer is a male and the second a female?

b(i). Describe a decision diagram.

(ii). Identify the major disadvantage of using a decision diagram in determining probability.

(15 marks)

4a. Define the following terms as used in Probability.

- i. Heads
- ii. Outcome
- iii. Tail

b. Given that a coin was tossed 4 times, use a table to show the outcomes.

(15 marks)

5. Write short notes on any five of the following concepts. Give a good example in each case.

- a. Quantitative variables
- b. Qualitative variables
- c. Independent variables
- d. Dependent variables
- e. Discrete variables
- f. Continuous variables

(15 marks)