

FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI

DEPARTMENT OF AGRICULTURAL EXTENSION

POST-GRADUATE EXAMINATION (MSc.) FOR HARMATTAN SEMESTER, 2017/2018

Course: Research Methodology

Code: AEX 803

Instruction: Answer Four questions; at least two from each section.

Time: $2\frac{1}{2}$ hours

SECTION A

1. (a) The university of Florentus has been widely criticized for over-loading Postgraduate students of Agricultural Extension by the inclusion of the course; Research Methodology. In a public hearing session, you were nominated to make a case for this as a sustainable development initiative for food security using relevant examples
(b) List five (5) conditions for selecting a lead equation in an Ordinary Least Square Multiple Regression Technique.

2. In a particular Local Government Area, Felix with about 5000 farming households, since after the introduction of Alternate row cropping technology in the state, Barigo and Nation; Ugochi, five years ago, the status of the technology has not been established. The nation intends going into the 2nd phase of the technology and experts are criticizing the plan on the bases that there should be a benchmark. As a professional Extensionist, you have been selected to do the following:
 - (a) Design a research topic from the above scenario.
 - (b) State apt research problems for a study.
 - (c) Formulate Five (5) objectives.
 - (d) Design Five (5) hypotheses that would be amenable to analyses using Five (5) different statistical tools

3. Briefly explain the following:
 - (a) Relevance of justification in research.
 - (b) The importance of theoretical and analytical frameworks in research.
 - (c) Conditions for using purposive sampling and test for reliability.
 - (d) When to use Rank order and biserial correlations.
 - (e) Hypothetically reference one (1) textbook, one (1) journal article, one (1) proceeding article, one (1) book chapter and an article in "The Economy Magazine", using American Psychological Association (APA) Sixth (6th) edition referencing style.

SECTION B

1ai. What are the differences between post-test only design and pre-test post test design of experimental research design?

ii. Describe the research process from where it starts to the end of the process.

b. Write short notes on the following research methods:

- Quasi-experimental method
- Ex-post facto method
- Case and field method.

c. Distinguish between basic research and applied research.

2ai. What type of inferential statistics can be used in analyzing data collected at:

- Nominal level?
- Ordinal level?
- Interval level?

ii. Describe what each of the tools mentioned above is used for.

bi. What are the components of research design?

ii. What are the importance of online collaborative tools to researchers.

iii. Distinguish between t-test and z-test statistics.

c. Describe the steps one should follow in collecting and ^{sharing} ~~shedding~~ research questionnaire using google drive.

3a. Give two features of web 2.0 that can assist a researcher with example.

b. Using the table below, answer the following questions:

i. Highlight the steps taken to achieve this result using Microsoft excel package.

ii. Interpret the result.

Table 1: Test of significant difference between male and female farmers in their perception of the effect of participation in community development project on their livelihood

Variables	N	Mean	Standard Deviation	Z-cal	Z-tab	Decision
Male	147	329.45	3.601	267.89	1.96	Null is rejected
Female	77	242.12	1.240			

c. Enumerate the features of research proposal for which you are demanding for a five million support from Shell Petroleum Development Company (SPDC) Post Harcourt.