NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SCHOOL OF AGRICULTURAL SCIENCES
SEPTEMBER/OCTOBER 2015 EXAMINATION

Course Code: AEM 501
Course Title: Statistics and research methods in extension
Time Allowed: 3 Hours
Instruction: Answer any five (5) Question

1. (a) i. What is a research?
ii. The purpose of research?
iii.State the characteristics of a research problem.

(b) i. What are the factors that determine the scope in selecting a research topic?
ii. Enumerate the criteria for a good problem statement.
iii. List the essential steps identified in conducting a research or in a research process.

2. (a)i. Below are ages of farmers in a s elected rural community. Construct the frequency and cumulative frequency tables respectively.
23,26,26,27,28,28,28,29,29,29,29,30,30,30,31,31,31,31,32,32,32,32, 33,33,33,33,34,34,34,34,35,35,35,35,36,36,36,36.
(ii) Eight farmers were randomly selected for the adoption of improved cassava variety in a locality. The ages of the farmers are as follow: 32,24,22,20,30,15,18 and 38.
Calculate the median age of these farmers and the range.

(b) State the rules for constructing a table.

3. List the following.
(a)i. The types non-probability sampling,
ii. Tips for constructing a bar chart
i. Steps in drawing a pie chart.
(b) i. Enumerate the factors that determine survey research.
ii. List the different categories of survey research.

4. (a) List the types of data collection in a social research.

(b) i. As a researcher, enumerate the points that will guide you in problem identification.

ii. What are the factors that will determine the selection of a research problem?

5. (a) The following ages of farmers were obtained in a farming community:

12, 14, 15, 16, 17, 19, 22, 24, 25, 24, 26, 27, 28, 28, 29, 30, 31, 32, 33,

33, 32, 36, 37, 37, 38, 39, 39, 38, 37, 42, 42, 43, 44, 46, 48, 48, 47, 51,

52, 52, 54, 58, 62, 62, 64, 65, 66, 68.

Find the median age of the farmers.

(b)i. State the role of pre-test in a survey.

ii. State the characteristics of inadequate response.

6. (a) In a sample of 100 farmers, 60 of the farmers were female, 40 were male and their knowledge level was determined to be 70% and 80% male and female respectively, calculate the average knowledge of the farmers.

(b) List criteria for a good hypothesis.

(c) List the functions of hypothesis.

7. (a) Seven farmers were randomly selected in a selected community for training. Their respective ages and scores obtained at the end are as shown below.

Scores: 9, 8, 7, 6, 5, 4, 3.

Age: 81, 64, 49, 35, 25, 16, 19.

Using the above information, calculate the variance.

(b) State the guidelines for constructing a good questionnaire.

(c) Outline the techniques for dealing with inadequate response.