



NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF AGRICULTURAL ECONOMICS AND EXTENSION
2020_2 EXAMINATION

Programme: Agricultural Extension and Management

Course Code: AEM 772

Course Title: Research Methods and Statistics

Credit Unit: 2

Total Score: 70 Marks

Time Allowed: 2 Hours

Instruction: Answer compulsory question one (1) (25 marks) and any other 3 (3) Questions (15marks each)

1a. 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.

Using the formula below, determine the median age of the farmers.

$$\text{Mdn} = L + \frac{\left(\frac{N}{2} - cf6\right)\dot{I}}{Fw}$$

Where

Mdn = Median

N = Number

L = Lower limit of intervals within the median lies containing the median

(25marks)

Fw = Frequency of cases within the interval containing the median

\dot{I} = Interval size

b. Skewness is described in terms of the tails of the distribution. If this is true, identify and discuss the different distribution shapes.

2a. In a sample of 100 farmers, 60 of the farmers were female while 40 were male and their knowledge level was determined to be 70% and 80% male and female respectively, calculate the average knowledge of the farmer **(5marks)**.

b. Justify the meaning of hypothesis using five (5) instances **(5marks)**.

c. Identify five (5) secondary sources of data **(5marks)**.

3a. Calculate the variance of the population and sample size of the raw data in the table below **(10marks)**

<u>X</u>	<u>X²</u>
9	81
8	64
7	49
6	36
5	25
4	16
3	9

b. Enumerate using five instances the basic steps involved in conducting action research **(5marks)**

4a. The purpose of research is to find answers to questions or solutions to problems through application of specific procedures. Identify **ten (10)** essential steps in research process **(10marks)**.

b. Provide five solutions to the ways in which inadequate responses can be handled in a research **(5marks)**

5. Having successfully conducted a research on ground nut production in your State, provide a broad sequence

of contents of a comprehensive research report **(15marks)**.

- 6a. The purpose of research is to find answers to questions or solutions to problems through application of specific procedures. If this assertion is true, identify ten (10) essential procedures in the research process **(5marks)**.
- b. Whatever may be the type of research, generally five types of data are collected in social science research. Enumerate the five (5) types of data that are collected in social research **(5marks)**
- c. Suggest using five (5) instances the rules that will guide the researcher in problem identification **(5marks)**