



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**FACULTY OF AGRICULTURAL SCIENCES**  
**DEPARTMENT OF AGRICULTURAL ECONOMICS AND EXTENSION**  
**FIRST SEMESTER 2019 EXAMINATION**

**Programme: Agricultural Extension and Management**

**Course Code: AEM772**

**Course Title: Research Methods and Statistics**

**Credit Unit: 2**

**Total Score: 70 Marks**

**Time Allowed: 2 ½ Hours**

**Instruction: Answer questions one (1) and any other three (3) Questions.**

- 1ai. What is research? (6marks)
    - ii. What is research designed for? (2marks)
    - iii. Suggest the classification of research report based on target audience (3marks)
    - iv. Outline the components of research that is aimed at evaluating on-going action programme or projects (6marks).
  - b. What are the different steps to follow in order to draw the following charts and diagrams:
    - i Bar charts (2½marks)
    - ii. Pie charts? (3marks)
  - c. Suggest five rules to be followed in constructing a table (2½marks)
2. Briefly explain the following;
- a. Inferential Statistics (9 marks)
  - b. Null Hypothesis (6 marks)
- 3a. Outline the points to note during sampling (5marks)
- b. Explain what you understand by;
    - i. Systematic sampling (5marks)
    - ii. Double Sampling (5marks)
- 4ai. Sampling method can be categorized into two groups. Mention these two groups (2marks).
- .ii. List three types of probability sampling methods known to you (3marks).
- bi. Why do we use samples in research? (5marks)
- ii. What is data elicitation method? (3marks)
- iii. List types or sources of data (1mark).
- iv. Mention two (2) factors that play important role in sources of data (1mark).
- 5a. Explain the meaning of questionnaire (8marks)
- b. Explain the meaning of question order as it is used in research (7marks).
- 6a. Enumerate the steps used in ex-post facto design (4marks)
- b. Outline the imitations of Non-equivalent group (6marks)
  - c. What do you understand by one-shot case study? (5 marks)