



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14-16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**  
**SCHOOL OF SCIENCE AND TECHNOLOGY**  
**JANUARY/FEBRUARY 2013 EXAMINATION**

**B.Sc AGRICULTURAL EXTENSION AND MANAGEMENT.**

**RESEARCH METHODS AND SOCIAL STATISTICS (AEM 772)**

**INSTRUCTIONS:** Answer FIVE (5) questions only. All questions carry equal marks

**TIME ALLOWED:** 3.00hrs

- 1a. Differentiate between basic research and applied research. (5Marks)  
1b. List the criteria for developing a theory in research. (5marks)  
1c. Briefly discuss the significance of theories in research. (10Marks)
- 2a. What are the components of a research proposal? (5 Marks)  
2b. Discuss fully any three of the components listed in 2a above. (15marks)
- 3a. Enumerate the basic steps in hypothesis testing. (7marks)  
3b. Differentiate between primary data and secondary data. (4Marks)  
3c. Briefly highlight the advantages and disadvantages of interview as a tool for data collection. (9Marks)
- 4a. With examples enumerate the variables which affect adoption that must be considered when drafting a questionnaire. (10marks)  
4b. Highlight the qualities of a good enumerator. (10marks)
- 5a. Given the following set of data 10, 30, 20, 15, 20, 25, 20, 30, 20, 35 determine the mode. (2marks)  
5b. What is the median of the following set of data 32, 34, 22, 20, 30, 15, 18, 38, 24? (2marks)  
5c. Suppose you have this data on training of Agricultural Development Project staff in six states calculate the mean. What is the major limitation of the mean as a measure of central tendency? (8marks)
- | State  | No of trainings | No of participants |
|--------|-----------------|--------------------|
| Bauchi | 22              | 205                |
| Lagos  | 31              | 184                |
| Enugu  | 18              | 177                |
| Delta  | 36              | 260                |
| Ebonyi | 12              | 221                |
| Ilorin | 40              | 160                |
- 5d. Differentiate between regression analysis and correlation analysis. (8marks)
- 6a. Define research report and briefly discuss its broad organisation. (10Marks)  
6b. Write short notes on (i) Deductive Inference (ii) Inductive Inference. (10Marks)

7a. In attitudinal measurement, what are the parameters that need to be sorted out. (5marks)

7b. Briefly discuss the following (i) Nominal Scale (ii) Ordinal Scale (iii) Multidimensional Scale. (10 Marks)