



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**  
**SCHOOL OF SCIENCE AND TECHNOLOGY**  
**JUNE/JULY EXAMINATION**

**COURSE CODE: AEM501**

**COURSE TITLE: STATISTICS AND RESEARCH METHODS IN EXTENSION**

**TIME ALLOWED: 3hrs**

**INSTRUCTION: Answer five (5) questions only. All questions carry equal marks**

1a. Briefly, highlight the limitations of cross-cultural research.  
(5Marks)

1b. Write short notes on the following:

- I. Fundamental research
  - II. Applied research
  - III. Action research
- (5marks each)

2a. List the types of data that can be collected in a social science research  
(5Marks)

2b. Discuss the characteristics of research problem  
(15 marks)

3a. What are the factors to consider in problem evaluation?  
(5Marks)

3b. What do you understand by hypothesis and what are the criteria for developing a good hypothesis?  
(15Marks)

4. Differentiate between the following:

- I. Qualitative attributes and quantitative variables;
  - II. Moderator variable and control variable; and
  - III. Continuous variable and discrete variable.
- (20Marks)

5a. Discuss fully, the significance of pre-testing questionnaires highlighting how it can be administered (10Marks)

5b. What are the techniques to be employed when dealing with inadequate responses (10Marks)

6a. List the rules to be applied when forming a table  
(5Marks)

6b. Write short notes on the following:

- I. Pie chart

- II. Histogram
- III. Positively skewed distribution  
(5 Marks Each)

7. Given the following data set arrange a frequency distribution and calculate the Mean, Median and Mode. (20 Marks) 20, 24, 30, 15, 17, 31, 38, 20, 38, 38, 17, 24, 30.