

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**University Village, NnamdiAzikwe Expressway, Jabi, Abuja**

**Faculty of Agricultural Sciences**

**June/July 2017 Examination**

**Programme: Agricultural Extension and Management**

**Course Code: AEM 501**

**Course Title: Statistics and Research Methods in Extension Credit Unit: 3**

**Total Score: 100 Marks Time Allowed: 3 Hours**

**Instruction: Answer Question 1(compulsory) and any other four (4)**

1. a. What is a Research Design? **4 marks**

 b. State any four roles of pre – test survey **4 marks**

 c. Calculate the variance for the population and sample size of cowpea farmers with these values; 9, 6, 4, 8, 7, 3, 2, 5 **12 marks**

2. a. Enumerate on the different types of data collected in social science research. **8 marks**

 b. Define the following terms;

i. Research Methodology **2.5 marks**

ii. Social Research **2.5 marks**

 c. Trace the importance of research in development. **7 marks**

3. a. In sequence, list the steps identified in the process of research **7.5 marks**

 b. Discuss any five factors that determine the selection of a research problem? **10 marks**

 c. State any two criteria for a good research problem **2.5 marks**

4. a. Conceptualize the term Hypothesis. **4 marks**

 b. Briefly discuss the types of hypothesis. **8 marks**

 c. State the types of errors in research **4 marks**

 d. State two important functions of hypothesis**4 marks**

5. a. What do you understand by Research work plan? **5 marks**

 b. Briefly discuss any four classes of variables in Research. 1**2 marks**

 c. Why is hypothesis regarded as an important and indispensible tool of scientific research?

**3 marks**

6. a. Briefly discuss the types of data used in research. **5 marks**

 b. What are the sources of data adopted in any research? **10 marks**

 c. In a sample of 200 maize farmers, 120 were females as against 80 that were females. The knowledge level of the female farmers was 80% and the males 60%. Calculate the knowledge level of the farmers. **5 marks**

7. Write short notes on any four headings:

 a. Field Studies **5 marks** d. Case study**5 marks**

 b. Survey research**5 marks** e. Ethnographic studies **5 marks**

 c. Content/document analysis**5 marks**