Course Title: Statistics and Research Methods in Extension
Course Code: AEM 501
Credit Unit: 3
Total Score: 70 Marks
Time Allowed: 3 Hours
INSTRUCTION:
Answer compulsory question 1 (30 marks) and any other 4 questions (10 marks each).

QUESTION ONE
a. Define Research and Research Design (6 mks)
b. Enumerate THREE purposes of Research (3 mks)
c. Explain the term "Research Problem" (3 mks)
d. A research problem is recognized by some characteristics. State any FIVE of the notable characteristics (5 mks)
e. A survey of the performance of Agricultural Extension students on AEM 501 was conducted and the result thus revealed: 60, 59, 40, 81, 35, 40, 60, 50, 60, 52 and 60. From result, find: (i) The mean (6 mks) (ii) Median (3 mks)
                              (iii) Mode (2 mks)   (iv) The Range of the scores (2 mks)

QUESTION TWO
a. What goal does research aim at achieving (2 mks)
b. The Research process are numerous. Identify any FIVE of these steps (5 mks)
c. What is sampling error (3 mks)

QUESTION THREE
a. Mention and explain TWO types of Research (4 mks)
b. Carefully State FOUR functions of hypothesis (4 mks)
c. List TWO types of probability sampling methods (2 mks)

QUESTION FOUR
a. Write briefly on what you understand as "Qualitative Attributes" and "Quantitative Attributes (4 mks)
b. From the scores of the students available: 60, 59, 40, 81, 35, 40, 60, 50, 60, 52 and 60. Find the first, second, third and fourth quartile of the score (4 mks)
c. Mention the basic benefits of a research design (2 mks)

QUESTION FIVE
a. What is Cross-Cultural Research (4 mks)
b. A researcher of Agricultural Extension was at a cross-road to collect data. Advice him/her on FOUR types of data he should source for (4 mks)
c. What is the sole purpose of report writing? (2 mks)

QUESTION SIX

a. Write short note on the term "case study" in research (4 mks)

b. State Four guidelines a researcher should adopt in questionnaire design (4marks)

c. What is frequency polygon (2 mks)

QUESTION SEVEN

a. Define measures of Central Tendency (2 mks)

b. What is a Pie-chart? (3 mks)

c. Assume a student submitted his WAEC result for admission and the scores were English 62, Maths 51, Physics 45, Chemistry 63, Biology 72 and Government 60. Use the scores to draw or produce a pie-chart (5 mks)