



NATIONAL OPEN UNIVERSITY OF NIGERIA

University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone, Jabi, Abuja
Faculty of Agricultural Sciences, Dept. of Agricultural Economics and Extension,
PoP Examination Questions, 2021 Academic Session¹²³⁴⁵

Course Title: Statistics and Research Methods in Extension

Course Code: AEM 501

Credit Unit: 3 Units

Total Score: 70 Marks

Time Allowed: 3 Hrs

INSTRUCTION: Answer Four Questions Only

QUESTION ONE

- a. In one sentence, what is the goal of social research? (2 ½ mks)
- b. Action research is basically aimed at solving problems. Enumerate the five (5) steps involved in basic research. (5 mks)
- c. A research student of crop science took the height of plants under experiment and observed them as follows: 4, 6, 8, 10, 10, 8, 8, 8, 6, 8 and 4.
Taking the place of the researcher, and using tables, find the
 - i. The mean height of the crops. (5 mk)
 - ii. The median height of the crops. (2 mks)
 - iii. Define and solve for the mode of the height of the crops. (3 mks)

QUESTION TWO

- a. Write short notes on Descriptive Research (3 ½ mks)
- b. Briefly discuss the following sampling procedures:
 - i. Simple random sampling (4 mks)
 - ii. Stratified random sampling (3 mks)
- c. A researcher of crop science took the height of different crops under investigation and found the height of the crops to be as shown below; (7 mks)

Crops	Maize	Ground nut	Soya bean	Sugar cane	Guinea corn	Millet
Height of crops (cm)	12	4	6	18	21	14

Use the information above to produce a pie-chart for the crops (use degrees in your calculations)

QUESTION THREE

- a. Explain the term 'Research' (5 ½ mks)
- b. Explain Research Design and what it involves (6 mks)
- c. As far as research is concerned, the setting and use of hypothesis is very vital. State four (4)

functions provided by hypothesis in this regard. (6 mks)

QUESTION FOUR

- a. As a research, there is a need to be careful in selecting, choosing and accepting his/her hypothesis in order to guide against occurrence of errors. Mention and briefly expatiate on the types of errors that could occur in research (5 mks)
- b. Elaborately describe what cross-cultural research is. (4 mks)
- c. From the set of numbers given as: 4, 6, 8, 10, 10, 8, 8, 8, 6, 8 and 4. Find the 1st, 2nd, 3rd, and 4th quartile. (4 ½ mks)
- d. As far as research is concerned the use of data cannot be overemphasized. Write short notes on primary and secondary data. (4 mks)

QUESTION FIVE

- a. Assume a set of numbers was given as: 4, 6, 8, 10, 10, 8, 8, 8, 6, 8 and 4. Find the Range. (3 ½ mks)
- b. Producing a good bar chart would require some necessary information or tips. State four (4) of those tips. (4 mks)
- c. State measures of dispersion, and give four (4) examples in which it can be expressed (4 mks)
- d. As a researcher, explain any four (4) major factors that are needed to be considered in choosing a good research problem. (6 mks)