



NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone, Jabi, Abuja
Faculty of Agricultural Sciences
Department of Agricultural Economics and Extension
Second Semester Examination October/November, 2019

Course Title: ---- Statistics for Social Research

Course Code: ---AEA 501

Credit Unit: ---- 3

Total Score: ----70 Marks

Time Allowed: -3 Hrs

NSTRUCTION: Answer compulsory question 1 (30 mks) and any four (4) questions (10 mks each)

Question 1

- i. Define Statistics (3 mks)
- ii. Explain two major classifications of statistics (5 mks)
- iii. Explain three (3) roles of statistics in our present day life (3 mks)
- iv. In how many ways can 10 students be seated if 8 seats are available (4 mks)
- v. What is frequency polygon (2 mks)
- vi. Discuss Bar chart and Pie Chart (3 mks each = 6 mks)
- vii. Differentiate between Relative frequency and Cumulative frequency (4 mks)
- viii. Describe in words only: Arithmetic mean, Mode and Median (1mk each = 3 mks)

Question 2

- i. Differentiate between the types of statistics (4 mks)
- ii. Describe Geometric mean of a positive value (2mks)
- iii. Explain four (4) properties of a normal distribution (4 mks)

Question 3

- i. Discuss class interval and class limits (3 mks)
- ii. State 3 reasons why sampling of respondents is necessary in research (3 mks)
- iii. Define “hypothesis” and state types of hypothesis (4 mks)

Question 4

- i. Explain Measures of Central Tendency (3 mks)
- ii. Discuss frequency distribution (3 mks)
- iii. Assume a set of numbers was given as 1, 3, 5, 7, 7, 7, 3, 4, 5, 3, 4, 7, 10, 9, 10, 8, 9, 7, 3 and 4 (n = 20)
Using appropriate Statistical method, Find;
 - (i) The Arithmetic mean of the set of numbers (5 mks)
 - (ii) The Median of the set of numbers (3 mks)
 - (iii) The mode of the set of numbers (1 mk)

Question 5

- i. From a set of numbers given as: 1, 3, 5, 7, 7, 7, 3, 4, 5, 3, 4, 7, 10, 9, 10, 8, 9, 7, 3 and 4 ($n=20$)
Find:
- The Range of the numbers (*3 mks*)
 - The First, Second, Third and Fourth quartile of the set of numbers (*4mks*)
- ii. If a die is tossed without bias, what is the probability of;
- Either 1 or 2 showing up (*1 mk*)
 - 1 not showing up (*1 mk*)
 - 2 showing up (*1 mk*)

Question 6

- i. Assume a set of students in the Dept of Agricultural Economics and Extension sat for an examination and had an average score of 45, 60, 77, 82, 93, 80, 43, 81, and 58 in the following respective subjects Maths, English language, Biology, Chemistry, Physics, Economics, Geography History and Sociology. Represent these scores in a pie chart using Degrees (*9 mks*)
- ii. Discuss 3 types of probability (*6mks*)

Question 7

- What does standard deviation implies (*2 mks*)
- Describe the term “population in statistics” (*1 mk*)
- Discuss 3 types of non-random sampling (*6 mks*)