



NATIONAL OPEN UNIVERSITY OF NIGERIA

University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone, Jabi, Abuja

Faculty of Agricultural Sciences

Second Semester POP Exam Question October 2019

Course Title: Analytical Techniques for Animal Production I

Course Code: AGR 305

Credit Unit: 2

Total Score: 70 Marks

Time Allowed: 2 Hours

INSTRUCTION:

Answer Compulsory question 1 (25 marks) and any 3 questions (15 marks each).

Question one

- a) Determine the differences between precision and accuracy of experimental error. (4 marks)
 - b) Outline the features of three (3) common experimental designs in Animal Science. (12 marks)
 - c) Distinguish between the two (2) sources of data (4 marks)
 - d) List four (4) equipment necessary for thermometric analysis (2 marks)
 - e) Highlight three (3) attributes of a good central tendency (3 marks)
- (25 marks)

Question two

- a) State the features of the following
 - I. Scatter Graph (2 marks)
 - II. Pie Chart (2 marks)
 - III. Bar Chart (1 mark)
 - IV. Pictogram (1 mark)
- b) Calculate the mean, mode and median of the following data; 1, 3, 3, 4, 4, 6, 6, 6, 6, 7, 8, 8, 9, 12 (5 marks)
- c) Identify two (2) properties of dispersion (2 marks)
- d) Data Collection is an important process in animal science researches, give two (2) reasons (2 marks)

(15 marks)

Question three

- a) Give the meaning of the following
 - I. Frequency Distribution (2 marks)
 - II. Histogram (2 marks)
 - b) Explain type 1 and type 11 error (4 marks)
 - c) Distinguish between research hypothesis and statistical hypothesis (2 mark)
 - d) Outline two (2) characteristics of Chi-Square and three (3) uses of Chi-square (5 marks)
- (15 marks)

Question four

a) Briefly explain the following terms

- I. Classical Probability (2marks)
- II. Empirical probability (2marks)
- III. Multiplicative Rule of Probability (2 marks)
- IV. Additive Law (2marks)
- V. Bayes' Theorem (2 marks)

b) Give five (5) reasons for rejecting analytical samples (5 marks)

(15 marks)

Question five

a) Write short notes on

- I. Representative Sampling (3marks)
- II. Stratified Sampling (3 marks)
- III. Random Number Sampling (3 marks)

b) Outline six (6) basic information to note when collecting samples for analysis (6 marks)

(15 marks)

Question six

a) With the aid of a diagram illustrate:

- I. negative correlation (3 marks)
- II. positive correlation (3 marks)

b) Define proximate analysis and mention the components (4marks)

c) Outline five (5) basic steps in experimentation (5 marks)

(15 marks)