NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone, Jabi, Abuja
Faculty of Agricultural Sciences
2020_2 Examination

Course Title: Analytical Techniques for Animal Production I
Course Code: AGR 305
Credit Unit: 2
Total Score: 70 Marks
Instruction: Answer question one and any other three (3), question one is compulsory and its carries 25marks while others carry 15marks each.
Time Allowed: 2 Hours

Question one

a) Give the meaning of the following terms

I. Outcome
II. Replication
III. Experiment
IV. Sampling Size
V. Probability
VI. volumetric analysis
VII. Standard Solution
VIII. Correlation
IX. Randomisation
X. Control (10 marks)

b) Define and mention three (3) advantages of standard deviation (4 marks)
c) Briefly explain the following

I. Range
II. Scatter Graph
III. Pie Chart (6 marks)

d) Enumerate four (4) equipment used in thermometric analysis (2 marks)
e) Mention two (2) application of Chromatography in agriculture (2 marks)
f) State one (1) application of gravimetric analysis in the animal science (1 mark)

Question two

a)Highlight five (5) important stages in carrying out an experiment (5 marks)
b) With the aid of a diagram illustrate positive and negative correlation (6 marks)
c) State the difference between research hypothesis and statistical hypothesis (2 marks)
d) Mention two (2) benefits of randomization (2marks)

Question three

a) State the meaning of Data Collection (2marks)
b) Mention two (2) importance of data collection to animal scientists (2 marks)
c) Elaborate on the two sources of data in Data Collection (5 marks)
d) Highlight five sources of systematic errors (5 marks)
e) Give the meaning of experimental error (1 mark)

Question four

a) Define the term dispersion (1 mark)
b) Mention two (2) properties of dispersion (2 marks)
c) State two (2) disadvantages of using range as measure of dispersion (2 marks)
d)Mention (5) five points to note in developing a good sampling plan (5marks)
e) Identify five (5) guidelines for construction of tables (5 marks)

Question five

a) Define Proximate Analysis 1 mark
b) Give the meaning of Experimental Design 2 marks
c)Describe the features of three (3) experimental designs in Animal Science. (12 marks)

Question six

a) Explain the two (2) basic Probability Laws (6marks)
b) Distinguish between type 1 and type 11 error (4marks)
c)Highlight three (3) characteristics of a good central tendency (3marks)
d)Give the meaning of Frequency Distribution (2marks)