



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

*POP Exam Question 2021\_7836*

**Course Title: Elementary Topics in Animal Breeding**

**Course Code: ANP 307**

**Credit Unit: 2**

**Total Score: 70 Marks**

**Time Allowed: .2 Hours**

**INSTRUCTION:**

**Answer Compulsory Question 1 (30 marks) and any 2 questions (20 marks each).**

Question one

- a) Define Locus and segregation (2 marks)
- b) Outline five (5) differences between the X-Y and X-0 systems of sex determination (10 marks)
- c) Using a diagram, illustrate the GENETIC and PHENOTYPIC ratios of monohybrid cross between two heterozygote tall plants (Tt) (8 marks)
- d) What are some of the problems a breeder will face in breeding animals for disease resistance (10 marks)

Question two

- a) Expatiate on the two (2) laws of Mendel (8 marks)
- b) Using a table, state three (3) differences between Monohybrid and Dihybrid crosses (6 marks)
- c) Differentiate between dominant and recessive genes (6 marks)

Question three

- a) Outline four (4) differences between the two types of variations we have (10 marks)
- b) Mention three (3) differences between lethal and semi lethal genes (6 marks)
- c) Give the meaning of complimentary genes (4 marks)

Question four

- a) Highlight the concept of animal breeding (3 marks)
- b) Explain the pattern of inheritance of quantitative traits (6marks)
- c) Briefly explain the following  
Z-W system of sex determination (3 marks)  
SRY system of sex determination (8 marks)