



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF ANIMAL SCIENCE AND FISHERIES
SEPTEMBER 2020_1 EXAMINATION**

COURSE CODE: ANP 312

COURSE TITLE: Genetics and Breeding

TIME: 2 Hours.

INSTRUCTION: Answer question one and any other three.

1.
 - (a) How is Animal improvement exercise carried out?
 - (b) Explain briefly the Pedigree method of selection
 - (c) Using appropriate illustration, describe the characteristics of offsprings of the F_1 and F_2 generation when crossed, if dominance is lacking in alleles, and a red- coated short horn is represented by RR and white – coated short horn by rr.
 - (d) What are the basic Mendelian Laws of inheritance?

2. Write short notes on the following methods of Selection.
 - (a) Sib selection
 - (b) Progeny testing
 - (c) Within family Selection

3.
 - (a) What are Nuclei acids?
 - (b) Name two types of Nuclei acids involved in the transmission of character in a living organism.
 - (c) Write short notes on the types of Mutation

4. (a) Describe Clone Selection and hybridization methods of asexual propagation.
(b) What are the major limitations of Clone Selection method?

5. (a) Differentiate between line- breeding and upgrading
(b) Write short notes on the function of lipids in the cell.

6. (a) What are the major differences between the following:
 - (i) Smooth and Rough endoplasmic reticulum
 - (ii) Somatic Cells and Sex Cells
(b) Briefly describe the pure -line Selection method of breeding Crops.