



UNIVERSITY OF SWAZILAND
1st SEM. 2017/2018
FINAL EXAMINATION PAPER

PROGRAMMES: **BSc ANIMAL SCIENCE**
 BSc ANIMAL SCIENCE (DAIRY OPTION)
 BSc AGRONOMY
 BSc HORTICULTURE
 BSc AGRICULTURAL EDUCATION

COURSE CODE: **ASC 205**
TITLE OF PAPER: **PRINCIPLES OF GENETICS**
TIME ALLOWED: **TWO (2) HOURS**
INSTRUCTIONS: **ANSWER FOUR (4) QUESTIONS**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY
THE CHIEF INVIGILATOR**

Question 1

(a) What is chromosomal aberration?

(5 Marks)

(b) Enumerate and discuss causes and effects with five (5) given examples.

(20 Marks)

Question 2

State the three (3) laws of Mendel's inheritance and write brief notes on any two (2) deviations from Mendel's inheritance.

(25 Marks)

Question 3

(a) List five (5) possible sources of mutation.

(5 Marks)

(b) Write on the effect of any four (4) from the list in (a) above on reproductive performance of a known animal species.

(20 Marks)

Question 4

(a) Why is DNA regarded as the genetic material in living organisms?

(10 Marks)

(b) Where is DNA located and how is it expressed?

(15 Marks)

Question 5

Write comprehensively on any five (5) sex linked conditions.

(25 Marks)