



UNIVERSITY OF SWAZILAND

1st SEM. 2016/2017

RESEAT 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 ANY FOUR (4) QUESTIONS

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

Question 1

Briefly describe what is meant by each of the following biotechnology terms:

- (a) Dominant allele
- (b) Recessive allele
- (c) Homozygote allele
- (d) Heterozygote alleles
- (e) Co-dominance

(25 Marks)

Question 2

Meiosis is responsible to phenotypic differences observed in offsprings born to the same parents. SUPPORT this argument with valid points.

(25 Marks)

Question 3

DISCUSS genetic conditions that defy Mendellian laws of Inheritance that you know

(25 Marks)

Question 4

DNA is the genetic material: DISCUSS how this fact was proven

(25 Marks)

Question 5

Define mutation and discuss causes of mutation in natural population

(25 Marks)